# MINING FOR DEVELOPMENT?

# A SOCIO-ECOLOGICAL STUDY ON THE WITBANK COALFIELD

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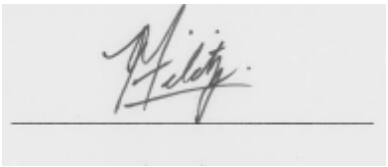
# Declaration of Authenticity

Submitted in partial fulfilment of the requirements for the degree of Masters in Development Studies, in the Graduate Programme in the School of Development Studies,

University of KwaZulu-Natal,

Durban, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was not used. It is being submitted for the degree of Masters in Development Studies in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.



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# Abstract

Coal mining on the Highveld has historically served, and continues to serve as an indissoluble cog in South Africa's development. The study contends that the inherent speculative character of coal as a finite resource results in bearing costs beyond the financial sphere. These costs at some stage of the mine life-cycle have to be accounted for. By using a Polanyian interpretation of *double movement* and *crisis,* the study argues that the manner in which natural factors such as coal have historically been inscribed in the production process, alongside labour and technology, to a large degree determine the character of productive relations in a particular society. More fundamentally, it is argued, this *interaction* between capital, society and nature determines the extent to which the State is able to perform its role of *counter-movement* against the over-exploitation of society and nature.

This is demonstrated by situating the development of a former coal mining village, Rietspruit colliery, within the necessary historical phase of South African development – as hinged upon the *accessibility* and *availability* of coal, in particular from the Witbank coalfield. It is however, in a post-coal mining context that the study alludes to the unintended social costs arising from coal-led development, arguing social costs and inequality as evident at Rietspruit colliery, as effectively *institutionalised.* This is due to the historic function of the State *vis-à-vis* facilitating mineral extraction.

On this basis, the study calls into question recent sustainable development discourse such as the Department of Minerals and Energy's *Sustainable Development through Mining* (2009) (SDM) initiative. The study argues the notion of mineral extraction and coal mining in particular, serving as the means *de jour* for achieving sustainable development, as flawed. This is illustrated at Rietspruit colliery by reflecting upon the manner in which a post-mining sustainability plan was implemented. The core issue concerns the *dis-embedding* of social costs related to mining, including mine closure, from the necessary historical, socio-political and socio-ecological context. Compounded by a poorly enforced regulatory environment, this approach views mine closure, including the social aspects of mine closure, in a de-politicised, technocratic manner of rationalising closure as cost-effectively as possible. It is here that the utility of the socio-ecological approach is made evident, by opening up the discursive space for social justice discourses relating to the social costs of coal mining, to find common ground with discourses concerned with environmental activism.

# Acknowledgements

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# List of Acronyms and Abbreviations

| | |
|---|---|
| ANC | African National Congress |
| BBC | British Broadcasting Corporation |
| BECSA | BHP Billiton Energy Coal South Africa |
| BP | British Petroleum |
| CIAB | Coal Industry Advisory Board |
| DHS | Department of Human Settlements |
| DOH | Department of Housing |
| DME | Department of Minerals and Energy |
| DBE | Department of Basic Education |
| EITI | Extractive Industries Transparency Initiate |
| ELM | Emalahleni Local Municipality |
| EPZ | Export Processing Zone |
| EMP | Environmental Management Plan |
| ESCOM/ESKOM | Electricity Supply Commission |
| EWG | Energy Watch Group |
| EWT | Endangered Wildlife Trust |
| FOB | Freight on Board |
| FSE | Federation for a Sustainable Environment |
| Gt | billion ton (metric) |
| ha | hectare |
| IDC | Industrial Development Corporation |
| IEA | International Energy Agency |
| ILO | International Labour Organisation |
| ISCOR | Iron and Steel Corporation |
| ISO | International Organisation for Standardisation |
| JPOI | Johannesburg Plan of Implementation |
| MEC | Minerals and Energy Complex |
| MMSD | Mining Minerals and Sustainable Development |
| MPRDA | Minerals and Petroleum Resources Development Act 2002 |

| | |
|---|---|
| Mt | million ton (metric) |
| NEMA | National Environmental Management Act 1998 |
| NGO | Non Governmental Organisation |
| NGP | New Growth Path |
| NPA | National Prosecuting Authority |
| NUM | National Union of Mineworkers |
| OPEC | Organization of the Petroleum Exporting Countries |
| USA | United States of America |
| RBCT | Richards Bay Coal Terminal |
| RCDF | Rietspruit Community Development Forum |
| RMS | Rietspruit Mining Services |
| ROM | run-of-mine |
| SAICE | South African Institute of Civil Engineers |
| SAR | South African Railways |
| SASOL | Suid Afrikaanse Steenkool en Oilie |
| SDM | Sustainable Development through Mining |
| SLP | Social Labour Plan |
| SMME | Small, Medium and Micro Enterprises |
| VFTPC | Victoria Falls and Transvaal Power Company |
| WCI | World Coal Institute |
| WSSD | World Summit of Sustainable Development |

# CHAPTER ONE: INTRODUCTION

> *There can be little doubt but that the whole High Veldt is one immense coal-field, which at some future day is destined to play a most important part in the history of the world's industry.*[1]
>
> *(Atcherly, 1878 in Lang, 1995:17).*

## 1.1. Problem Statement

This study is tasked with exploring the ability of finite resource dependent societies to successfully transition to a new resource independent growth path in the event of resource exhaustion. In sum, the question is asked: Can mining finite resources such as coal serve as the means for achieving "sustainable development?" It is this claim which underpins recent South African economic policy discourse, such as the *New Growth Path* (2010) (NGP) as well as the Department of Minerals and Energy's *Sustainable Development through Mining* (SDM) (2009) initiative, propagating growth of the extractive sectors as a necessary phase of development, in a bid to attain equitable and diversified development.

The study argues that there is a strategic relevance for focussing on coal, not only within the context of notions of sustainable development evident in recent South African economic policy, but more importantly, as a result of coal's historical dual utility to the South African economy; serving both as a core domestic energy feedstock, in addition to being considered a key commodity driving regional economic development. More specifically, the study will explore the extent to which it may be necessary to internalise historical and present-day social costs arising from coal-led development, within a post-mining context of expected development outcomes.

This will be demonstrated by way of a case study on Rietspruit colliery, which is located on the Witbank coalfield.[2] During its 26 years of operation, Rietspruit colliery had served as a

[1]The thoughts of Rowland J. Atcherly, analytical chemist, travelling through the Transvaal Boer Republic in an area that included Emalahleni in the late nineteenth century, published in his A *Trip through Boerland1878*(Lang, 1995:17).

[2]The name *Witbank* was derived the white outcrops on the farm named *Witbank* in the 1890s, marking as a signpost for travellers passing through the region. In 1903 the owner of the Witbank Colliery, Mr. Neuman, founded the township of Witbank (Lang, 1995:43, 51). The city of Witbank was renamed to Emalahleni in 2006

model colliery and mine village due to its 'unusual' housing of African workers in comparatively high standard family homes. The village built for African workers at Rietspruit was considered an anomaly at the time, which contrasted sharply with the single sex dormitories that characterised much of South Africa's mining industry throughout the 20th century.

Rietspruit's profile was in no small part determined by its significant scale and exposure in the South African coal export market, mining on average 4,5 million tons (Mt) of export-grade coal per year for the international market. Notwithstanding, the colliery was faced with closure in May 2002 for reasons attributed to resource exhaustion. The village of Rietspruit though, remains. It is within the context of resource dependency and resource exhaustion for regions such as Rietspruit that the study aims to assess whether the necessary foresight has been awarded in balancing short-term gains associated with finite, coal-led development with post-1994 development goals concerning creating a sustainable and socio-economic enabling environment for all – as mandated under the *1996 Constitution of the Republic of South Africa* (Chapter 2, Section 24). This will be illustrated by assessing the development outcomes associated with Rietspruit colliery's post-mining sustainability plan known as the social labour plan (SLP), focussing specifically on discourses of representation, governance and redress.[3]

The study argues social costs arising from coal-led development, as will be explored at the Rietspruit colliery, are often overlooked in the bid for attaining short-term economic objectives. Accordingly, the use and dominance of coal in the South African economy has been rationalised on the basis of *availability* and *necessity*, or more recently, seen as the *means* for achieving sustainable development. With this in mind, the study draws attention to the contestation and ambiguity surrounding concepts such *development* and *sustainability*,

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which Zulu translates to "place of coal." It is considered a Local Municipality, and forms part of the Nkangala District Municipality in the Mpumalanga Province. The case study is situated within Emalahleni Local Municipality. The city name *Witbank* now known as *Emalahleni*, are used interchangeably, in a historically and chronologically appropriate manner, referring only to the Local Municipality. The naming of the *Witbank coalfield* remains unchanged.

[3]Section 24 of Bill of Rights of the Constitution stipulates that "the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development" (Mohamed, 2006:13). Included here is the *National Environmental Management Act of 1998* (Chapter 5), the *Minerals and Petroleum Resources Development Act of 2002*, and the *National Framework for Sustainable Development in the South African Minerals Sector 2009 (draft) - also referred to as the Sustainable Development through Mining initiative (SDM).*

often situated in depoliticised, a-historical discourses fixated on path dependent continued growth.

It is on this basis that notions of "sustainable development," "environmental rehabilitation" and "capital substitutability" require contextual clarification due to a narrow understanding of their relevance and application.[4] The ambiguous and contested character of mainstream sustainability discourse has further been exacerbated by mounting international concerns related to climate change. The result is a discourse which falls short in fully acknowledging the social cost implications for individuals who are currently socio-economically dependent on coal-led development. There is thus a need for a discourse that is cognisant of the social cost implications of coal dependent development in South Africa. The study proposes a *socio-ecology of development* as a discourse, which articulates development outcomes and costs related to coal mining, by recognising the interconnectedness between social and ecological spheres.

## 1.2. Towards a Socio-Ecology of Development

The study argues for the relevance of a socio-ecological approach grounded in historical materialism, viewing production as an "articulation between nature and society," with nature identified as the "support and active" agent of this process (Leff, 1995: 13). This motivates the study to adopt a historical materialist approach, evident in Chapter 3, interrogating the manner in which coal has historically been inscribed in South Africa's historical and continued development.

The socio-ecological approach emphasises the relationship between the social and ecological spheres in the appropriation of nature *(coal mining)*, alongside social factors such as *labour* and *technology*, necessary for the production process. This results in an inter-relational socio-ecological and technological dimension to production, including costs (discussed in Chapters 5 and 6) (Leff, 1995:12-15, 22). Costs, as articulated in this study, include specific *social* inequitable outcomes arising from coal mining, in particular focussing on post-mining *liability* for loss of *economic activity*, *representation* and *governance*.

[4]Referring here to notions of, and fixations with social and natural capital, amongst others, in attempting to mediate the failings of the market under neo-liberalism. See in particular Fine (1999) on his critique of social capital and Neumayer (1998) on the irreversibility of biodiversity loss, as well as Bond (2006) on the net loss as a result of natural resource extraction in resource intensive economies (Neumayer, 1998; Bond, 2006).

The efficacy of adopting a socio-ecological approach grounded in historical materialism resides in its emancipator potential, both in analytical purpose and development discourse at large. This is achieved as a result of a socio-ecological approach seeking to historicise, politicise and illustrate the primacy of natural or ecological factors of production in shaping the character of productive relations within society (Leff, 1995: 13). The starting point, and core theoretical framework for this study, is to recognise the fictitious aspect of commodification of non-produced commodities such as land, labour and money, as well as the resultant *speculative character* of market relations associated with such commodities (Polanyi, 1944, 2001).[5]

Polanyi (2001) argued, it is erroneous to think *non-produced* or "fictitious" commodities such as land, labour and capital will behave the same way as produced commodities. He argued the assumed self-regulating market *logic* or *rationalism* of continued production and reproduction of capital would push "human societies to the edge of the precipice." This he argued due to the inherent vulnerability of fictitious commodities from over-exploitation and over-speculation, resulting in intermittent *crisis* as inherent to the market *logic*. The speculative character of coal as a non-produced commodity is laid bare in Chapter 2, concerning coal reserve stock measurement (Block in Polanyi, 2001: xxv).

This undeniable character of the market economy, argued Polanyi (2001), would necessitate a *counter(or double)-movement* led by the State to check the over-exploitation and destruction of both society and nature (Leff, 1995:12, 13, 15, 22; Block in Polanyi, 2001: xxv).[6] A so-called free market economy or dis-*embedded* economy, the type to which Adam Smith prescribed, argued Polanyi (2001), was nothing other than a "utopian project." State intervention at the inception of the so-called free market through the introduction and enforcement of private property laws and laws of exchange, were seen not only as the antecedent to market development, but was seen as fundamental to mitigate and recover from ensuing periodic *crises* (Block in Polanyi, 2001: xxv, xxvi; Marais, 2011:110).

[5]Polanyi's seminal work, *The Great Transformation* first published in 1944 (2001) analysed the historical development of Europe from the feudal epoch into the industrial capitalist epoch, critiquing the classical economics approach of *laissezz-faire* capitalism, and in particular the rationalisation of the market "logic."

[6]Polanyi (2001) argued crises would arise as the result of speculative excesses caused by either inflation or deflation of these commodities, as a result of affixing misguided values to these commodities. Evidenced most recently by the 2008 financial crisis requiring significant State and International Monetary Fund bailouts in the USA and Europe – prior to this, the Great Depression of 1929-1932 was the most significant. These two events stand out as the most significant crises, with numerous regional financial crises marking the nineteenth and twentieth century monetary landscape.

The view espoused by Polanyi (2001) does not however, prevent economies from operating along self-regulating market principles, nor does it result in automatic active State management of the economy to mitigate crises. This, for the simple reason that market rationality fixated on short term gains and productive continuity, clouds all sense of moral or social rationality concerning the character of such development. The net outcome, as history has shown, are intermittent *crises* manifested both in the way of conventional financial recessions, but also increasingly in the social and ecological environment. This is evident with increasing levels of inequality pervasive nationally and globally, in addition to critical resources such as land, air and water coming under threat (Block in Polanyi, 2001: xxv, xxvi).

Although within Polanyi's context a *crisis* referred primarily on the financial variant, it can and must be extrapolated to the social and ecological factors of production. The argument will be made that just as financial externalities are manifested in the supply-demand chain of the economy through the commodification and speculation of *non-produced* commodities, so social and ecological externalities are realised through affixing of a misguided and speculative value to social and ecological factors of production, including costs. In this way, the real costs of industrial production are discounted through classical economic cost-benefit measures, biased toward short term capital profitability, or narrowed sector specific interests (Greenwald and Stiglitz, 1986; Padilla, 2002).

Such an approach disqualifies assessment of the true costs of production accruing to the social and natural spheres on the basis of the explicit market bias of continued growth through continued commodification. This is legitimated as either in the pursuit for modernisation, motivated either as "necessity," or perhaps most seductively, as aiming for achieving "sustainable development."[7] In so doing, the critical role for the State to mitigate crises is often subverted due to the complicity of State interest with capital, which in turn impacts upon the State's mandate to ensure development in the interests of all of society. In such a scenario, the counter-movement, as Polanyi (2001) referred to it, shifts to the success of a class struggle that is able to garner broad-based support from beyond its ranks (Stroshane, 1997: 107).

[7]The latter point will be elaborated in Chapter 2's discussion on the viability of the Department of Minerals and Energy's (DME) Sustainable Development through Mining (2009) (SDM) initiative.

The need for a countermovement is especially pertinent for a country such as South Africa, where the State has historically been utilised to institutionalise a racially defined separate development. The results of this historic State-led phase of development are extreme levels of inequality and poverty for the majority of the African population. It is why the study posits by analysing the manner in which nature *(coal)* has been appropriated and commodified by capital, can tentatively serve as an entry point for understanding the *institutionalised* and pervasive character of inequality in South Africa.

This will be illustrated by situating the development and outcomes at Rietspruit colliery within the historical political economy of South Africa's development, read as the development of a Minerals and Energy Complex (MEC) – with the Witbank coalfield at the epicentre of this development (discussed in Chapters 3 and 6) (Fine and Rustomjee, 1996).

## 1.3. Research Questions

The study thus aims to assess:

A. What are the social outcomes of coal mining for the village of Rietspruit?
B. What is the character of productive relations within Rietspruit, specifically within a post-coal mining context and notions of sustainability and capital substitutability?
C. To what degree, if any, is there a disjuncture between theory and State policy concerning "sustainable development," legislation and practice in Rietspruit?

## 1.4. Study Methodology

The study methodology adopted is multi-disciplinary by nature, and views research as a process of knowledge discovery and interpretation, bound in a particular political economy of knowledge, power and history. This has motivated the research process to be informed by a historical narrative, allowing for a contextualised qualitative approach to follow. The relevance for a historical approach in qualitative research identifies "interpretation" as:

> historical, relative in the sense that it always presupposes historically transmitted preconceptions, and...in order to be relevant, it is applied in the present time by the interpreter. And to which, the interpreter projects it on a future...Every interpretation [thus] contains three aspects of time – past, present and future – as indissoluble moments [SIC].

(Alvesson and Sköldberg, 2000:85).

In this relation, the temporal aspects of knowledge motivate the research to be grounded in history, yet relevant, and future looking. This temporal aspect of interpretation underscores the relevance in considering the finite character of coal mining, its relevance to South Africa's economic development, in addition to assessing the post-mining social outcomes for the mine village of Rietspruit.

A stakeholder and purposive sampling approach was used to identify a range of key informants involved in the mine closure at Rietspruit. A combination of primarily face-to-face interviews as well as telephonic and email based interviews were scheduled on a first-available, first-interviewed basis. Detailed transcriptions of interviews were extrapolated from digital recordings, which formed the primary component of qualitative data.

The study explores the use of multiple theories, particularly critical in orientation, in a bid for achieving theoretical reflexivity. This is to ensure both the quality of the research as well as to seek new methods of inquiry, particularly at the interface between theoretical and empirical data interpretation (Alvesson and Sköldberg, 2000: 253, 254). The study subscribes to the notion that discourse analyses are the starting point for achieving theoretical reflexivity. This is affirmed by Brooks *et al* (2010), who call for qualitative methodologies that move beyond "attempting to extract 'hard facts' from research participants," through allowing participant voices to be heard unfiltered (Brooks et al, 2010:4).

Discourse in the context of the study is comprised of recognising the context in which "a statement [verbal or written] is made or to whom statements are directed," which in itself requires acknowledgment that discourse occurs "internally," within a specific socially constructed environment (Hajer, 1995:44). The study recognises power inherent in discourse as manifesting in various discourse economies, which are representative of the value positions held within the specific socially constructed environment (see Chapter 4, demonstrated in a conceptual model developed by the researcher). Discourse according to this view thus embodies specific value positions that are premised on specific knowledge positions, and are determined by a host of factors in the lived experience. Chiefly amongst these, it will be argued, are those emanating from the character of productive relations within a specific historical and socially constructed environment (Hajer, 1995:44).

## 1.5. Structure

The dissertation is comprised of six chapters, with the structure as follows:

Chapter one introduces the study and presents the core theoretical framework as premised on a socio-ecology of development. The chapter further illustrates the key research questions as well as methodological approach adopted in the study as multidisciplinary by nature, underpinned by a reflexive discourse analyses approach.

The second chapter starts by illustrating the significance and importance of coal to development. In addition, the chapter illustrates the technical character of the South African coalfields, and in particular the importance of the Witbank coalfield to South African coal production. Thereafter, the chapter alludes to the contested nature of coal reserve stock measurement for purposes of underscoring commodity volatility inherent in natural resources such as coal. The issue of primary resource exhaustion has a particular resonance to this study, and it is here that the study introduces Rietspruit mine and its accompanying village by way of a socio-economic profile. This sets the scene for a discussion exploring the validity of mining and mineral extraction as the means *de jour* for attaining sustainable development – inherent in recent State policy discourse. It is here that the study questions the extent to which the State has in fact at all deviated from its historic development trajectory.

The third chapter attempts to answer the above question, by presenting a historical reading of South Africa's industrial development, as hinged upon affordable coal, in particular from the Witbank coalfield. The chapter illustrates how the mineral discoveries of the late 19$^{th}$ century were the antecedent for modern State development. Thereafter the argument is made that through the commodification of coal a modern South Africa is born, however, bearing significant social costs in the form of an institutionalised and racialised social inequality. The Witbank coalfield with its vast coal reserves is at the epicentre of this development. It is here, at a particular point in South African economic history that Rietspruit colliery and its accompanying village are born, at the same time marking a point of departure both in production scale, as well as the social character of coal mining in South Africa.

Chapter four outlines and describes the research design and methodological approach adopted in the fieldwork component of the study. The motivation for the research approach and research locus is illustrated. The chapter details the sampling procedure, the research objectives, and the research process. The research methodology consists of a reflexive

discourse analysis approach, with purposive sampling indentifying key stakeholders involved in the post-mining SLP at Rietspruit. In addition, the study calls upon external stakeholders to elicit general trends within the coal mining region of Emalahleni. It is at this point that the chapter demonstrates and situates discourses from respective stakeholders in Rietspruit in the relevant discourse economies; the rational/legal economy, the economy of representation and governance and the economy of redress.

Chapter five presents qualitative findings from the review of the case study of Rietspruit's post mining social labour plan (SLP), arranged into key discourse themes, situated in the relevant discourse economies; the rational/legal economy, the representation and governance economy, as well as the economy of redress. The argument is made that mining capital was not concerned with the implementation of a post-mining sustainable development strategy at Rietspruit. This has been compounded by little meaningful support coming from the State. It is on this basis that the community at Rietspruit bear significant social costs arising from coal mining as manifested in particular in the representation and governance of their village.

The sixth chapter presents conclusions by way of synthesising the arguments of the preceding chapters and represents the interface stage of the research process; where the theoretical and empirical findings are juxtaposed. The underlying argument is made that historic path dependence on coal has resulted in the State performing a counter-movement not on behalf of the interests of society, but rather for those concerned with valorising natural capital in the form of coal. It is through this interaction between capital, nature, State, and society that inequality in South African society has effectively been institutionalised.

# CHAPTER TWO: COAL AS DEVELOPMENT

## 2. Chapter Outline

This chapter is concerned with underscoring the relevance of *coal* as a globally important energy commodity. In particular the chapter illustrates the importance of coal for South Africa, and for the region of Emalahleni in particular. It will further be argued that although coal represents an *affordable, available* and *reliable* energy feedstock, the sector however, is plagued by over speculation in terms of reserve stock measurement, in addition to conflating notions of utility with sustainability.

## 2.1. Relevance of Coal

Coal has played an important role in the economic development of developed and developing economies. Aside from the relevance of coal as a fuel commodity for thermal energy generation in electricity production, and as a fuel source used in furnaces for industrial smelting and baking processes, coal can be found in the many chemical derivatives and industrial applications it occupies. For example: Such as coal derived petroleum, hydrocarbons, fertilisers, plastics and industrial castings to name but a few (Fine & Rustomjee, 1996: 80).

The World Coal Institute (WCI)[8] in the 2005 report *Coal: Secure Energy* aimed at contributing to "global sustainable development" argues, coal will remain indispensible in meeting the current and future global energy demands for several reasons concerning affordability, availability, and reliability as an energy feedstock (WCI, 2005:2). Energy security argues the report, is especially important for rapidly industrialising economies, where the disruption in either short-term or long-term supply of primary fuel can have negative economic consequences for those economies (WCI, 2005:3).

Globally, coal remains the greatest "proven" energy source. Demand for coal according to the International Energy Agency (IEA) is expected to grow by 53 per cent by 2030, with coal demand already growing by 63 per cent in the 30 years prior to 2003. Other estimates indicate that as much as 73 per cent of global energy demand will be coal dependent by 2030 (Banks, 2007:233). The USA holds the greatest proven reserves ranging between 25-28 per

[8]The WCI "is a non-profit, non-governmental association, funded by coal enterprises and stakeholders and operated by a London-based Secretariat" (WCI, 2005).

cent of global reserves, depending upon the statistics consulted – with estimates ranging between 400-800 years of energy production capacity in that country – depending on the technological evolution of extractive capability (Wilson & Burgh, 2008: 179, 180; BP, 2010:32).

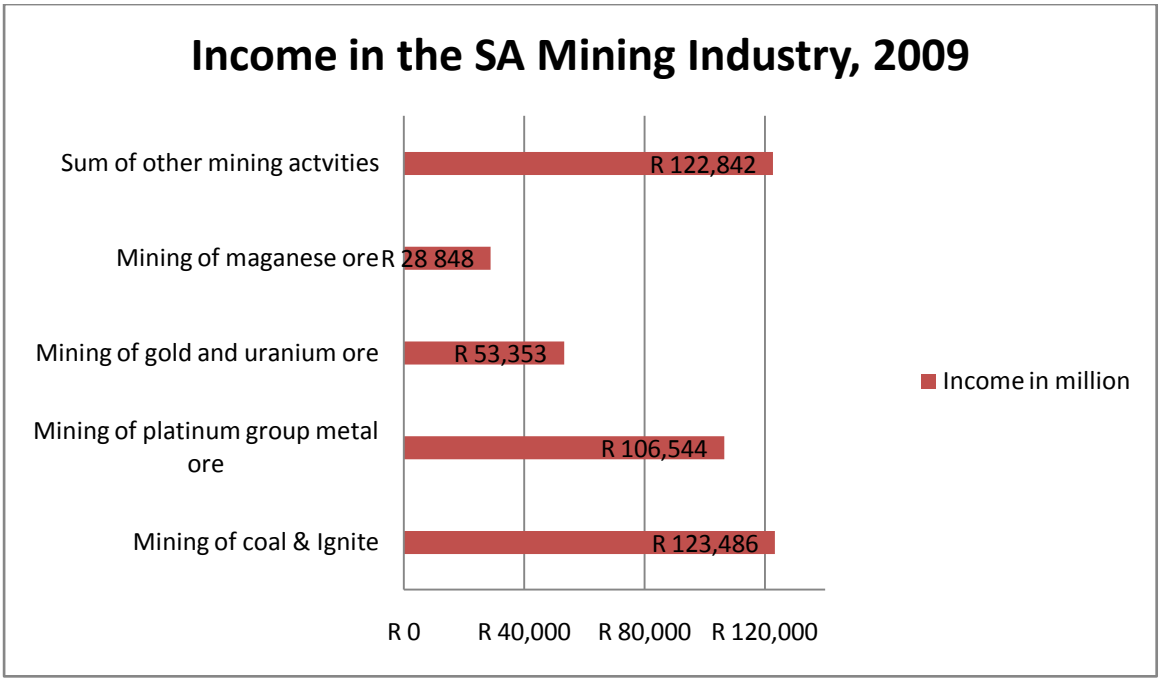
## 2.2. South Africa

South Africa holds the current rank of 6th/8th in recoverable global coal resources and reserves, accounting for 3-5 per cent of global coal reserves. Furthermore, South Africa is considered one of the major players in terms of exporting capacity, as well as in industry related technological development, best represented under the SASOL brand.[9] Domestically, coal can also be seen as a significant force shaping local economic development, with the development of townships such as Emalahleni, amongst others, as hinged upon the relative affordability and availability of coal (Wilson & Burgh, 2008: 179, 180; BP, 2010:32; see Fine and Rustomjee, 1996).

The central role coal plays in the South African economy is evidenced by the fact that 65,7 per cent of primary energy needs, and 94,7 per cent of electricity production in South Africa is derived from coal (Jeffrey, 2005:95; Fig, 2010:116; DME, 2009).

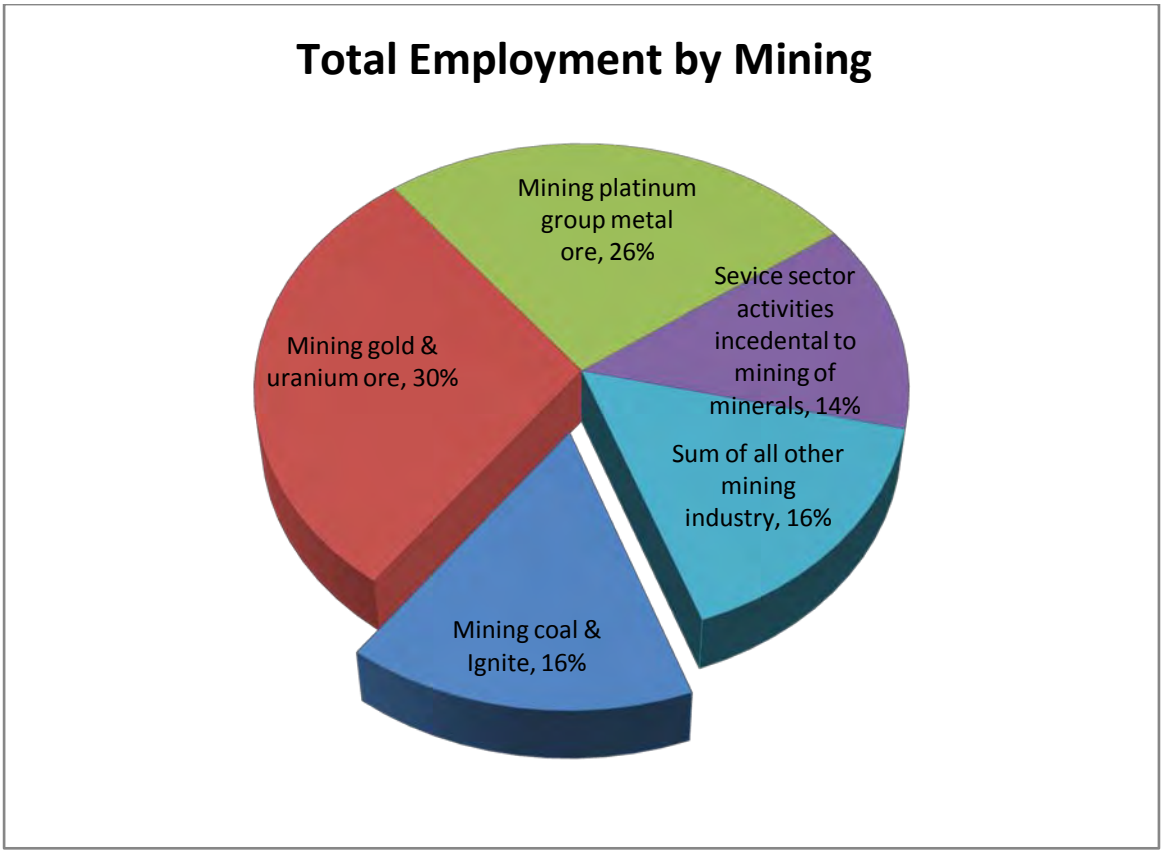
The total income by the mining industry for the financial year of 2009 was R405 073 million, of which the coal and ignite sector was the largest contributor, with R123 486 million contributed. See Graph 1 below. In addition, the coal and ignite sector operates with a profit margin of 17, 6 per cent, relative to platinum group metal ore at 18, 9 per cent and gold and uranium at 7, 1 per cent. Total profit margins for 2009 were R24 709 million (Statistics SA, 2009:5).

[9]The United States Department of energy in 2008 estimated that South Africa has 49 billion tons (Gt) of total recoverable coal, ranking it 6th globally. The South African Department of Minerals and Energy after several post 2000 revisions of total recoverable revised the figure from 50 Gt in 2003/04 to 26 Gt in 2005 and finally 31 Gt in 2006, ranking South African total coal reserves 8th globally (Hartnady, 2010:1). South Africa according to the Energy Watch Group report of 2007 is the 3rd largest net exporter of coal, behind Australia and Indonesia respectively (EWG, 2007).




Graph 1: Total income by type of mining (Source: Statistics South Africa, Mining and Industry 2009:1).

The high profit margins illustrated in coal mining have been facilitated by a large degree of technological innovation and mechanisation on a par unlike other mineral sectors. This is largely due to the geo-structural character of coalfields such as the Witbank coalfield, making it conducive for the introduction of draglines on vast opencast collieries, increasing the scale and rapidity of extraction, whilst decreasing the need for labour (see appendix 1 for dragline in operation). This is evidenced in Graph 2 below, with the coal and ignite sector contributing a total of 70 742 persons employed, or just 14 per cent of the total 501 934 persons employed in the mining sector as a whole as at 2009 (Statistics SA, 2009:1).

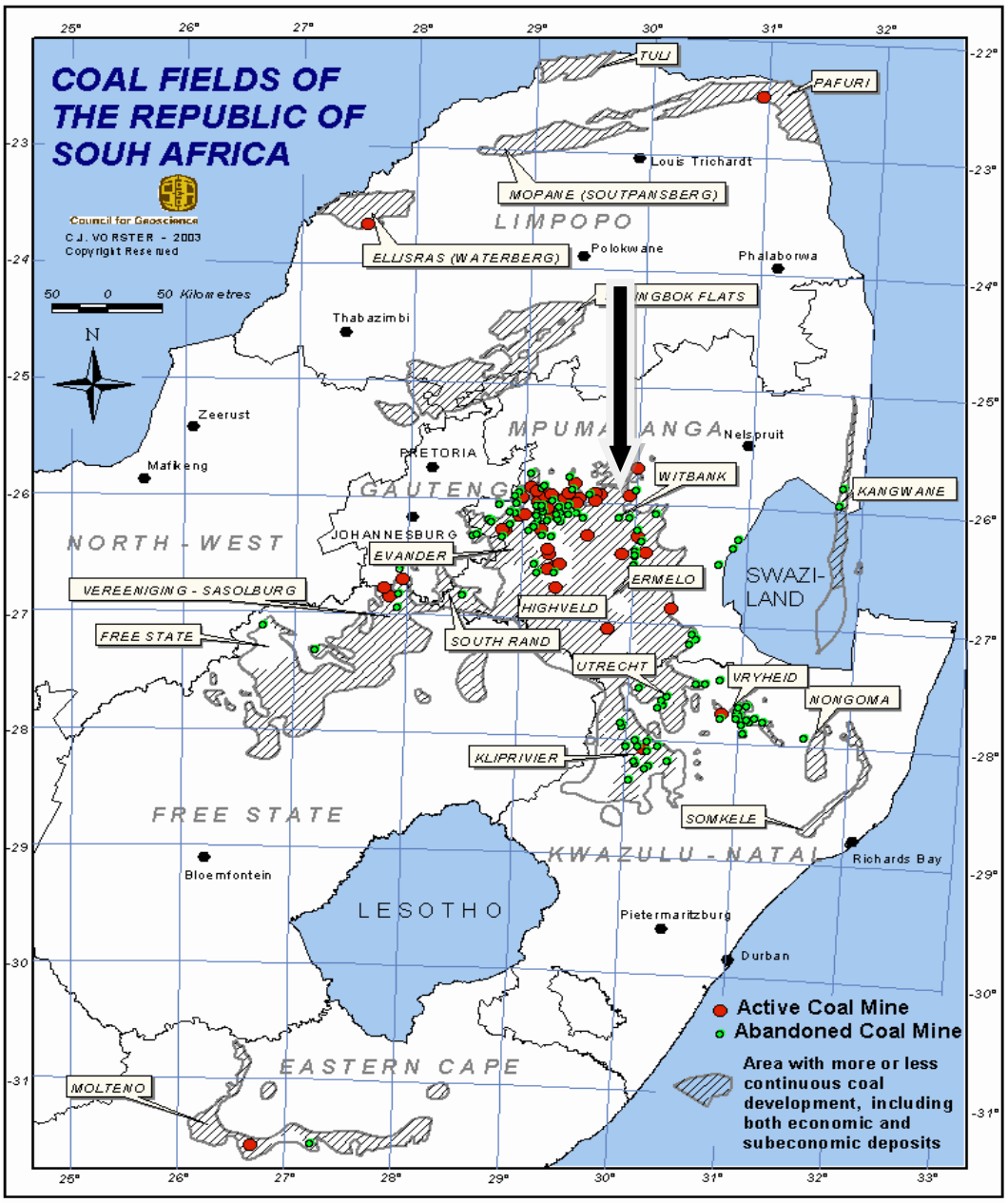



Graph 2: Employment by type of mining (Source: Statistics South Africa, Mining and Industry 2009:4).

### 2.2.1. The South African Coalfields

Altogether there are nineteen coalfields in South Africa located in the provinces of Gauteng, Mpumalanga, North West Province, Limpopo, KwaZulu-Natal and the Eastern Cape. The Witbank-Middleburg area is considered as the epicentre of coal production, along with Ermelo and the Secunda-Standerton areas of Mpumalanga. Coal mining areas outside of Mpumalanga include the Sasolburg-Vereeniging coalfield, in addition to smaller operations located in Free State/Gauteng, and in north-western KwaZulu-Natal (Jeffrey, 2005:95).

The South African Coalfields are represented in the map below with the black arrow indicating the area of the Witbank coalfield:




Map 1: South African coalfields (Source: Vorster, 2003 in Schmidt, 2008).

The primary coal producing areas are to be found in an “arc” like formation:

> ...running from northern Natal [Kwazulu-Natal], into the Eastern Transvaal [Mpumalanga], westwards to near Johannesburg, then South into the northern Orange Free State [Free State]. Moving from East to West, the main seams become thicker; from less than about two metres in Natal to typically four metres around Witbank [Emalahleni], the central and most important of the Transvaal coal districts. They also come closer to the surface, from an average of roughly 200 metres below the ground in Natal [KwaZulu-Natal] to rarely more than half this in the Witbank district [Emalahleni] [SIC].

(Alexander, 2008:48).

The geo-structural character of the recoverable coalfields bears significant importance within the industry: Until recently, most of the recoverable coal in South Africa has historically been found in the Witbank coalfield, mainly due to its "shallow and almost horizontal" character, rendering it extremely accessible and cost effective to mine (Schmidt, 2008: 3). This has been extremely conducive to the development of large-scale opencast collieries in the region. Opencast mining in South Africa makes use of primarily open pit, strip mining methods, facilitated by draglines and conventional earth moving equipment to remove the overlying strata or overburden to extract the coal. Collieries also make use of underground workings, which comprise of using board-and-pillar or long-wall and short-wall mining. Rehabilitation entails replacing the overburden using earthmoving equipment and stabilising the soil so as to prevent erosion (Snyman, 1998:155; de Jager, 1976:295).

There are three important varieties of coal namely; sub-bituminous, bituminous and anthracite. South Africa is a key extractor of bituminous or hard coal, extracting 244 Million tons (Mt) in 2006. The lower grade bituminous coal is utilised for domestic electricity production, whilst the higher grade coal known as steam coal, or thermal grade bituminous coal, with comparatively low sulphur content, is destined for the export market. South Africa, as noted earlier, occupies a key position (3$^{rd}$) in the global export market (Schmidt, 2008: 2).[10]

## 2.2.2. The Witbank Coalfield

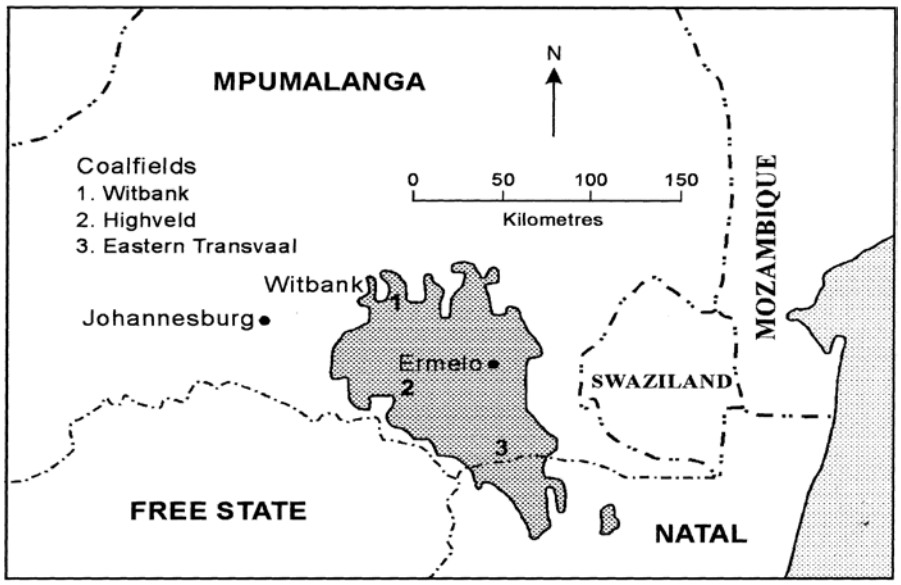
Furthermore, municipal regions such as Emalahleni owe its existence to the discovery of the coal. The Witbank coalfield, with formalised production starting in 1895, has historically witnessed several phases of State and private sector led industrial development, centred on the accessibility and availability of coal. The outcome has been the creation of an economic hub centred on the minerals and energy industry (Lang, 1995:51).

Prior to the prominence of the Witbank coalfield, the Natal coalfield and the coalfield on the East Rand serviced the emerging South African industrial economy. However, the importance of the Witbank coalfield to this process was soon realised once the collieries on the East Rand were exhausted. This culminated in the establishment of a local township in

[10] Reference to *coal* within this study refers to *hard coal.*

1903 by a Mr. Neuman, the owner of *Witbank Colliery*, and soon followed with the completion of a direct rail link to the Witwatersrand in 1906 (Lang, 1995:51).

Together these developments resulted in the Witbank district, with its easily accessible and relatively high grade coal, soon becoming "South Africa's premier source of coal...[that] by 1920 it was producing 5.6 million tons of coal, or 48,6 per cent of South Africa's total" coal output (Alexander, 1999: 32).



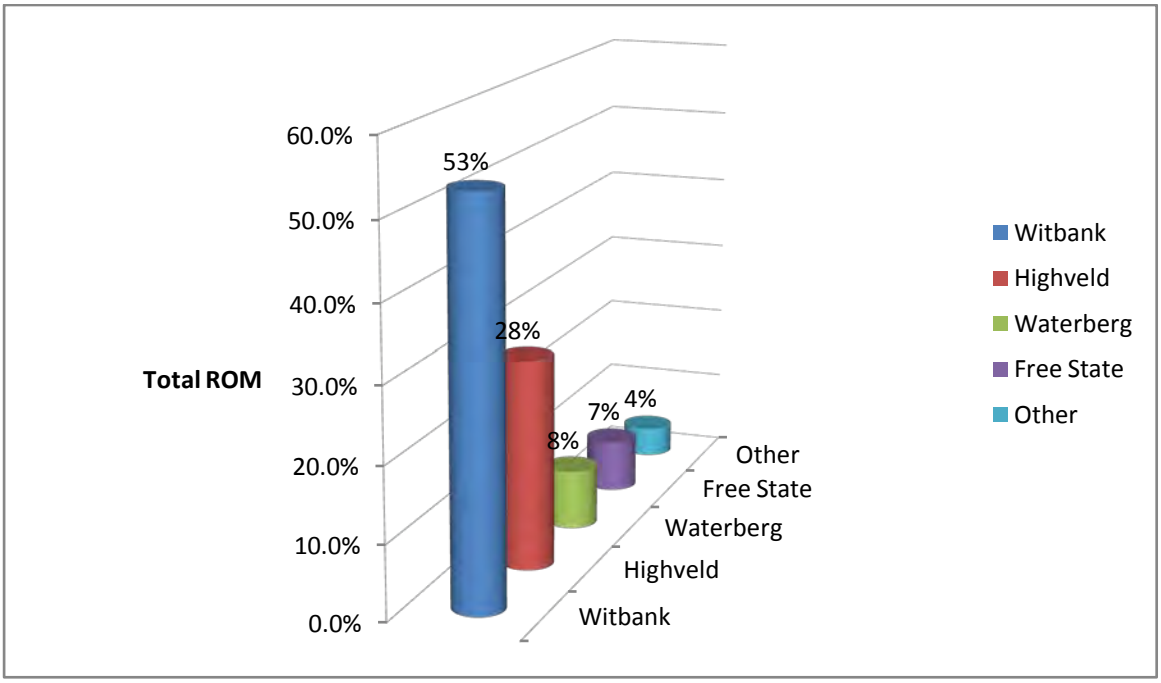

Map 2: Location of Witbank Coalfield (Source: Bell *et al*, 2001).

Growth in the importance of the Witbank coalfield grew at a fairly rapid pace in the early twentieth century that by 1946 there were 34 large modern collieries operating in the Transvaal, of which 23 were operating along the Witbank coalfield (Lang, 1995:128). Further noteworthy developments in the region concerned the significant expansion of the national electricity grid and the diversification of industry in the region during the course of the twentieth century. Currently no less than 48 per cent of the country's power supply is supported by the Witbank, Highveld and Ermelo coalfields, in addition to being host to a range of the countries heavy manufacturing industries in ferrous and non-ferrous metals (Hobbs *et al*, 2008:419).

What makes the Witbank coalfield so unique from the other coalfields in South Africa however, is that it not only bears the highest quality and quantity of recoverable coal, but is also considered the "largest conterminous area of active coal mining in South Africa." The area spans "190km from Springs in the southwest to Belfast in the northeast with an average north-south of 60km" (Hobbs *et al*, 2008:419). The jewel in the crown is its number two

seam, ranging between 4.5m-20m thick, considered the "most economically important" for export grade thermal coal (Jeffrey, 2005:97). In addition to seam number two, the Witbank coalfield is comprised of four additional coal seams, together considered as having "diverse characteristics," which allows for a range of "potential markets/utilisations" (Jeffrey, 2005:99).

To give one an idea of the significance and scale of the Witbank coalfield, of the 71 operating collieries in South Africa at the end of 2001, 39 (55 per cent) were located in the Witbank coalfield (Jeffrey, 2005: 101). Graph 3 below details the composition of each of the South African coalfields' contribution to the total run-of-mine production (ROM) at the end of 2006. At the end of 2006 the ROM for South Africa stood at 312 Mt of which 244 Mt of this were of "saleable quality." The Witbank coalfield alone accounted for 174 Mt (53 per cent) of the total ROM, followed second by the Highveld coalfield at 28 per cent, and the Waterberg coalfield third at 8 per cent (Ntlou, 2008 cited in Markets to Methane, 2007: 196,197).




Graph 3: Coalfield composition to total ROM production 2006 (Source: Ntlou, 2008 cited in Markets to Methane, 2007: 196,197).

The historic and continued significance of the Witbank coalfield both to South African industrial development and coal export capacity, renders the region as a hub of extreme economic importance to the current and future development of the country. Under the

contemporary phase of South African economic development, the region continues to play a central role as an energy and industrial core to the South African economy. The latest in a series of large scale, State-led industrial projects in the region concerns the development of the soon to be fifth largest coal-fired power station in the world; the R140 billion Kusile Power Station, currently under construction.[11]

Currently no less than 56 collieries are in operation in Mpumalanga, representing 81 per cent of South Africa's total ROM (DME, 2007: 17). Coal mining activity in Mpumalanga and South Africa will however, be on the increase as a result of recent proliferation in new coal mining ventures in the Mpumalanga region, with over 505 coal mining right licences issued since 2004, and a further 6000 licence applications pending (FSE interview). This increase has arisen partly as a result of increased growth in domestic demand in the wake of the national electricity shortfall, but also as a result of a surge in export demands from Asian markets, with India and China the key growth markets (FSE interview).

## 2.3. Development Paradox

However, according to Jeffrey (2005), the coal mining sector must be viewed with caution, as the Witbank coalfield is nearing depletion and that the most likely shift in production will occur to the largely under exploited and ecologically sensitive Waterberg coalfield (Jeffrey, 2005:96, 101; Peatfield, 2003: 359). This will result in a phasing out of non-viable operations in the region, including many of the existing coal mines in the region nearing the end of the life-cycle due to resource exhaustion; resulting in a greater incidence of coal mine closure and retrenchments. In addition the logistical shift to the Waterberg will impact upon the pricing of coal fired thermal electricity production, for reasons concerning significant infrastructure spending (R100 Billion) necessary to effectively exploit the Waterberg reserves (Peatfield, 2003: 359).[12]

In the broader industry context, the issue of coal depletion however, has recently gained prominence at a more fundamental level: As noted at the outset to this study, the future of coal as a viable energy feedstock, according to conventional wisdom in the industry, is all but guaranteed, with growth and demand said to significantly spike within the next 20 years (WCI, 2005:2). The measurement of coal reserves has however, for quite some time, drawn

[11] http://www.mpumalangacompanies.co.za/pls/cms/ti_secout.secout_prov?p_sid=19&p_site_id=150 - retrieved 24th February 2010.

[12] http://newspoint.co.za/story/411/75-rbct-export-about-63-million-tons-coal - retrieved 6th October 2011.

widespread criticism: The so-called coal sceptics paint a more cautious, even alarming picture concerning the status of global coal reserves. According to the Energy Watch Group's (EWG) report *Coal: Resources and Future Production 2007,*[13] "the data quality of coal reserves and resources are poor, both on global and national levels." The conundrum facing the industry according to the EWG (2007), concerns no objective way in accurately assessing the level of coal reserves, with conventional wisdom grossly overestimating "proven" reserves and resources (EWG, 2007:4).

In a bid to counteract this, there has been a recent shift by various States to downgrade so called proven reserves. For example German hard coal reserves have been downgraded by 99 per cent "from 23 billion tons [Gt] to 0.183 billion tons in 2004. This has resulted in former proven reserves now being reclassified as "speculative." Poland similarly downgraded its hard coal reserves by 50 per cent, with overall global resource assessments downgraded by 50 per cent in the period 1980-2005 (EWG, 2007:5).

The South African Department of Minerals and Energy (DME) has taken action launching a re-assessment of coal resources and reserves in the early 2000s, resulting in an official reduction of reserves from 51 Gt to 31 Gt in 2004, reducing it even further in 2005 to 26 Gt. The most recent review (2007) by the DME has estimated the total recoverable coal reserves and resources at 28 Gt, underscoring the speculative character of this sector (Hartnady, 2010:1).

For Hartnady (2010), these countermeasures do not go far enough with the time horizon or health of the industry still plagued by *over speculation*, arguing that the realistic coal reserves for southern Africa comprise of only 15Gt (Hartnady, 2010:2). A recent assessment of global coal reserves by Rutledge (2010), estimates (South) African reserves at 18-27Gt total recoverable coal, of which 8 Gt has already been extracted (Rutledge, 2010:6).[14]

Using this data in a Deffrey's plot, illustrating graphically the rate of decline of total recoverable coal reserves by way of ratio between (cumulative production and production) against (cumulative production), with 1988-2007 production statistics, Hartnady (2010), has

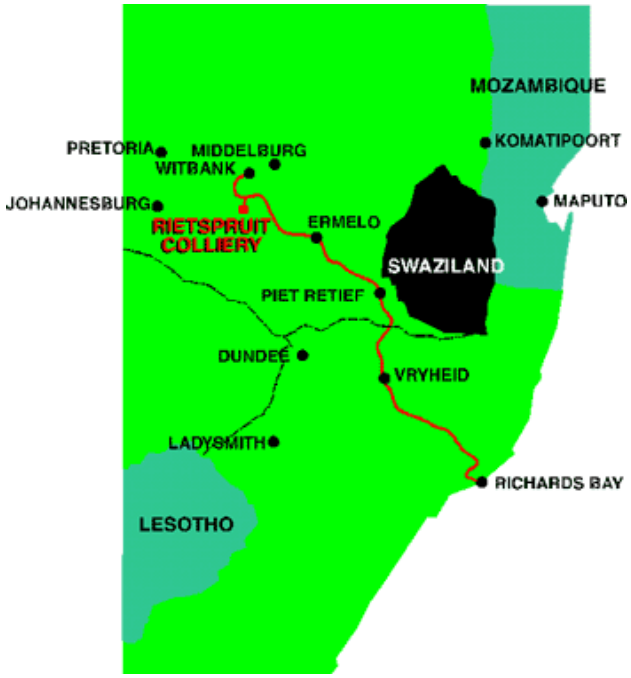
[13]Established by the German Member of Parliament, Hans-Jospef Fell, comprised of "independent scientists and experts who investigate sustainable concepts for global energy supply" (EWG, 2007).

[14]Effectively comprising of South Africa (3.7 per cent of global recoverable reserves) with a lesser role played by Zimbabwe (0.1 per cent of global recoverable reserves) and Botswana (under 0,1 per cent of global recoverable reserves) (Hartnady, 2010; BP, 2009:32).

revealed that (South) African coal production will peak by 2020 at 184 million tons (Mt) per year, with a 33 year standard deviation. Accordingly, 90 per cent (21 Gt) of total recoverable coal reserves (23 Gt) will be exhausted by 2062, of which 8 billion tons or 35 per cent has already been recovered. If one were to use the 1938-1974 growth rates, exhaustion of reserves at 90 per cent would misleadingly only occur in 2109 (Hartnady, 2010:2). Furthermore, this does not take into account the realisation of "new coal markets," potentially significantly more viable than South African coal mining, drawing into question the economic livelihoods of communities dependent upon coal mining.

### 2.3.1. Research Locus: Rietspruit Colliery

The issue of coal exhaustion and non-viability of mining has a particular relevance and resonance for this study: Once considered one of the largest opencast collieries in the southern hemisphere, and a key player in the South African export market in its day, Rietspruit colliery situated on the Witbank coalfield ceased all mining operations in May 2002. The rationale for closure arose as a result of the colliery reaching resource exhaustion (Coaltech, 2020: 19; Creamers web, 13September 2002; BBC Web, 7 November 2001).



Map 3: Location of Rietspruit colliery and link to Richards Bay Coal Terminal (Source: Anonymous).

Prior to the cessation of mining, the mine's owners claim to have strategized a rehabilitation and closure programme five years before closure in 2002, with implementation of that plan commencing immediately after the cessation of mining operations in May 2002. The mine's

owners opted for an "integrated approach" "dealing with all issues of mine closure and not just environmental rehabilitation" (SAICE, 2007:14).

The handling of the rehabilitation and mine closure won widespread praise and accolades; winning in the category of "Technical Excellence" in 2006 South African Institute for Civil Engineering (SAICE) awards (SAICE, 2007:15). It was also during this period of mine closure that Rietspruit attained International Organisation for Standardisation (ISO) 14001 (Environmental management), ISO 9001 (Quality) and OSHAS 18001 (Occupational Health and Safety) (RMS, 2002). In addition, the handover of the Rietspruit village to the community was claimed as a world leading example of post-mining sustainability, and was documented in several leading industry sustainability reports on mine closure, such as; the World Coal Institute (WCI)'s 2002 *Good News from Coal*,[15] and the IEA's Coal Industry Advisory Board's (CIAB)'s 2006 *Case Studies in Sustainable Development in the Coal Industry* report.[16]

On the ecological front, unconventional and groundbreaking methods concerning environmental rehabilitation were adopted, such as introducing draglines into the rehabilitation process alongside conventional methods. Prior to this draglines had only been used for excavation during the mining process due to high operational costs. Cost-benefit analysis however, determined that it would be beneficial to implement draglines into the vast area requiring rehabilitation, alongside the conventional earthmoving equipment such as bulldozers and graders (SAICE, 2007:15). At the cessation of operations in May 2002 the total area disturbed spanned 1760ha with a total of 2,12 Gt of material moved in its lifespan (RMS, 2002; SAICE, 2007:14; Coaltech, 2010:19).

From a social perspective, the owners took the decision to develop an elaborate "high road social labour plan" (SLP) as per legislative requirements under the *Minerals and Petroleum Resources Development Act* (MPRDA) (Act 28 of 2002). The SLP was tasked to ensure the post-mining socio-economic development, welfare provision and sustainability for the village and its members of Rietspruit (WCI, 2002; SDM, 2009:7).[17] The Rietspruit village comprised

[15]The WCI "is a non-profit, non-governmental association, funded by coal enterprises and stakeholders and operated by a London-based Secretariat" (WCI, no date).

[16]The IEA of which the CIAB is an affiliate, was established within the 1974 framework of the Organisation for Economic Cooperation and Economic Development (OECD) (CIAB, 2006).

[17]Rietspruit village comprises of the former White upper housing village known as Reed Stream Park, as well as the lower Lehlaka village, formerly for African employees, collectively known as Rietspruit village.

of a housing estate built by the mine owners at the start of production, designed to house 1500 employees and their families at the peak of production. It was once considered a model mining village, comprising of substantial infrastructure, including aircraft landing strip, rail linkages to the Richards Bay Coal Terminal, 24hr hospital, junior and senior schools, shopping centre, as well as a plethora of recreational facilities for residents, both White and African (Coaltech, 2010: 19-21; RMS, 2002).

Upon the cessation of mining operations in 2002, the mine owners through the SLP envisaged a "hand-over" of the mining village to the community. Social and basic infrastructure support was to be provisioned by the Emalahleni Local Municipality (ELM), through the formalisation of Rietspruit into the Emalahleni municipality that same year. The question of housing was dealt with by enabling former employees to purchase their houses at subsidised rates, in addition to eligible former employees receiving housing grants from the then Department of Housing. The proceeds of the house sales were to be channelled into a Section 21 company to be utilised as a development fund for community entrepreneurship and small medium and micro enterprise (SMME) development (Coaltech, 2010: 19, 20; WCI, 2002).

Several years on and the social outcomes of the mine closure, in particular the SLP for the village of Rietspruit, have been dismal. Unemployment in the village according to the *Laduma Report*[18] (2007) is at 65 per cent. This as a result of most, if not all, of the 10 Small Medium Enterprise (SMME) schemes designed to give employment to 700 community members, having failed to initialise (Laduma, 2007:6). Of the initial 1132 mine employees 536 were forcibly retrenched. Only 239 jobs were created of which 77 are sustainable – a mere 11 per cent of the target (Coaltech, 2010: 19, 20).

In addition to the high unemployment, the housing scheme failed to ensure housing for all employees, with a notable rise of illicit activity involving squatting by "outsiders" and significant vandalism to common property. Furthermore, infrastructure has fallen into disrepair, due in a large part to vandalism, with signs of urban squalor characterising the once pristine and showcase mining village. The situation is further compounded by the location and isolation of Rietspruit, circa 40 km away from Emalahleni, as well as lack of institutional

[18]The report is titled: *Revitalisation Strategy for Dying Mining Towns within Mpumalanga July 2007* for the Mpumalanga Department of Economic Development and Planning and the Development Bank of Southern Africa – Development Fund.

precedent for service provision to Rietspruit by the ELM. This has resulted in the provision of basic services to the village at best described as tenuous (Coaltech, 2010:20, 21).

## 2.4. Situating (Sustainable) Development

It is within the context of contested notions of sustainable development, and the failed implementation of sustainable development strategies that the study underscores the contested nature of concepts such *development* and *sustainability*. From the outset there remain irrevocable challenges concerning the *measurement* and *character* of *development*, what is required to be considered *sustainable development*, and most pertinently, *development for whom?*[19] This is compounded by poor legislative liability enforcement, resulting in disproportionate costs of production accruing to the vulnerable sectors of society.

As a result of these inherent challenges, the concept of development and sustainability from the outset are relegated to being fuzzy and inconsistent at best, and hollow at worst, as O'Connor (1994) notes:

> [A]mbiguity runs through all of the most important discourses on economy and the environment today...Precisely this obscurity leads so many people so much of the time to talk and write about "sustainability": the word can be used to mean almost anything...which is part of its appeal.
>
> (O'Connor, 1994:152 quoted in Peet and Watts, 1996:36).

Here it is necessary to recognise the proliferation of discourses concerning development, including discourses of sustainability, encompassing economic, environmental, social and cultural realms, as situated within a specific *knowledge economy*. The hegemony of this knowledge economy has its origins in post-World War II period of Western ascendancy and dominance of the global industrial paradigm. This paradigm is premised upon a global market *logic* or *rationalism,* which is fixated on industrial expansion and continued economic growth. And as such, discourses on development within such an environment are inherently beset with biases, ambiguities and conflicting ideals (Haque, 1999:200; Escobar, 1995).[20]

[19]*Development* and the *sustainability* thereof are subjective and value laden concepts, and as such are highly contested (see Ferguson, 1990; Castro, 2004; Haque, 1999; Hopwood, 2005; Lélé, 1991; Peet and Watts, 1996).

[20]Notions of sustainable development can be seen as the maturation of a wider discourse concerning *industrialisation,* as espoused by Rosenstein-Rodan, Harrod-Domar, Hirscman, Nurkse, Lewis and Rostow in the Cold War epoch (Martinussen, 1997:57-65). Sustainable development as a development paradigm came to

For Escobar (1995), it is specifically agency and the power over knowledge in development discourse, which is at the heart of the problem. Escobar (1995), recognises development discourse as representative of mechanisms of power, "embodied in endless programmes and 'strategies'," yielded by the powerful over the powerless. According to this view, development discourse occurs within a very specific *political economy of knowledge.* This is accordingly, shaped by the nature of relations and class interests within the market economy, and its inequitable development and distribution of wealth and resources, at a global and national level (Escobar, 1995:214).

It is what Peet and Watts (1996) and Escobar (1995), call controlling the political economy of *truth or knowledge*, where so-called truths become absolute truths, colonising reality to the point that development is reduced to "industrialisation, agricultural modernisation and urbanisation" (Peet and Watts, 1996:13; Escobar, 1995:214). Amongst the current, are notions of sustainable development and the *substitutability* of capital, specifically social and natural capital, aimed at ameliorating the glaring contradictions within society and the market (Escobar, 1995: 215; Ferguson, 1990; Fine, 1999: 4, 5; Bond, 2006:78; Neumayer, 1998).

## 2.5. Sustainable Development through Mining?

The need for a shift away from the *laissezz-faire* economic policy stance in post-1994 South Africa is most evident in the recent release of the *New Growth Path* (NGP) (2010). Sustainability in the context of the document is however, biased toward employment/economic sustainability. Instead much of the focus of the NGP concerns upgrading and up-scaling of existing sectors associated with mining. For example, expanding on the export capacity of coal and platinum are identified as key growth drivers, in addition to increasing downstream minerals beneficiation (NGP 2010: 34).

This includes developing initiatives such as the Department of Minerals and Energy's (DME) *Sustainable Development through Mining programme* (SDM) (2002). The Department of Minerals and Energy's (DME) *Sustainable Development through Mining programme* (SDM) (2002) programme was launched within the context of the World Summit of Sustainable Development (WSSD) (2002) held in Johannesburg. Through the WSSD (2002) a strategy

prominence in the Brundtland Commission's 1987 report *Our Common Future*, marking the need for development that ".meets the needs of the present without compromising the ability of future generations to meet their own needs." The concept was further consolidated at the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, and more recently "strongly asserted at the World Summit on Sustainable Development (WSSD)" at Johannesburg in 2002 (UNDP-SAHDR, 2003:2).

paper, the Johannesburg Plan of Implementation (JPOI) (2002) for the minerals sector emerged. The JPOI argues mining must serve as a means to achieving sustainable development, building onto the socio-economic and environmental "sustainability" discourses emanating from the Summit (SDM, 2009: 20; WSSD JPOI, 2002:5).

More specifically, the JPOI aims to transition away from unsustainable primary resource dependent economies into knowledge intensive economies, most recently evidenced in the NGP. The JPOI is underpinned by Agenda 21 principles such as good governance, transparency, sound economic policies, poverty eradication, employment creation, respect for human rights and management of natural resources to ensure sustainable patterns of consumption (WSSD JPOI, 2002:55).

It is within this context that sustainable development according to the SDM strategy (2009) subscribes to the internationalised WSSD discourse premised on the 1987 Brundtland report, calling for "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (SDM, 2009:9). In addition, the SDM programme subscribes to many of the global and national initiatives on extractive economies, attempting to instil "sustainable development" and poverty alleviating strategies as a core prerequisite going into the future. These include the World Bank's *Extractive Industries Transparency Initiate* (EITI) calling for "strengthening governance by improving transparency and accountability," as well as the *Mining Minerals and Sustainable Development* (MMSD) (1999) initiative, comprising of an "industry initiated project to scope the potential contribution of mining to sustainable development globally" (SDM, 2009: 11, 12).

Further development of the SDM programme has resulted in the recent release of the *National Strategic Framework for Implementing Sustainable Development in the South African Minerals Sector* (2009 August draft).[21] National legislature such as the *Minerals and Petroleum Resources Development Act* (MPRDA) (2002) and the *National Environmental Management Act* (1998) underpin the SDM strategy. These Acts emphasise enforcement of *liability* on the holders of mining rights concerning socio-economic responsibility for respective communities, as well as responsibility for social dislocation and ecological

[21]The Department of Environmental Affairs and Tourism's *National Strategy for Sustainable Development* (NSSD) (2008) can be seen as the precursor to this initiative.

degradation arising *in all phases of mining*, particularly in bid to safeguard the interests of historically disadvantaged South Africans (SDM,2009:9).

The MPRDA (2002) and NEMA (1998) both call for the internalisation of costs of production through an integrated social and ecological cost accounting approach to sustainable development. The MPRDA (2002) specifically calls for a social and labour plan, as well as a detailed environmental management plan as per conditions set out under NEMA (1998) (section 2, 23 and 24(7)).[22]

The MPRDA (2002) and NEMA (1998) are however, weighted towards new applications for mining and prospecting, seeking to transform the industry in terms of employment and economic equity targets. In addition, *remedial action* under the Acts focuses predominantly on the ecological aspects of mining, with NEMA (1998) at the core of this. This results in a failure to specify concrete parameters beyond "consultation with interested and affected parties" as to what specifically the social and labour plans should entail for mine closure. This is especially relevant for mines who fail to reapply for new mining or prospecting rights as per MPRDA (2002) requirements, in light of the cessation of mining operations at the time of drafting and implementation of the legislation (MPRDA, 2002: Chapter 4; NEMA, 1998: Chapter 7; Dixon, 2003: 483, 485; Pintér and Spitz, 2000; Swart, 2003).[23]

Although the SDM framework is an attempt to deal with these shortcomings, it falls well short of a set of concrete recommendations specifically pertaining to compliance of existing mining operations *vis-à-vis* social labour plans at the time of the passing of the MPRDA (2002). In light of the preliminary character of the strategic framework, it would be fair to pass comment on what the 2009 SDM report calls "key strategic objectives" going into the future.

The key strategic objectives are identified as poverty and inequality alleviation, Black economic empowerment, respecting human rights, and aligning beneficiation strategies with

[22]Section 2 of NEMA (1998) outlines the principles and definitions of sustainability with reference to all economic activity with Chapter 2 of the Constitution contextualising the discourse. In particular section 2.4.a.v. under NEMA (1998) is of relevance to this discussion, specifically stipulating "the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource" (NEMA Act 107 of 1998).

[23]The MPRDA (2002) stipulated the conversion of old order mining rights to new order mining rights with the State acting as custodian of all resources beneath the soil. This entailed existing as well as new mining operations to (re)apply for prospecting rights and/or mining rights, with the guidelines for this application stipulated under MPRDA (2002).

national development objectives. In addition, ensuring the internalising of "negative costs and cumulative impacts" associated with the mining life-cycle, and that this is in line with "sustainable development principles" (SDM, 2009). The core focus of the SDM strategy is thus an attempt to strategise an implementation mechanism of the social and ecological mandates *vis-à-vis* mining as provisioned for under MPRDA 2002 and NEMA 1998 (SDM, 2009:37; Dixon, 2003:485; Pintér and Spitz, 2000; Swart, 2003).

The minerals sector according to the SDM is seen as an integral *means* in transitioning from a finite resource intensive economy to a sustainable knowledge intensive economy, envisioned in the New Growth Path (2010). This will be achieved argues the SDM, through multi-stakeholder buy-in to a common vision of sustainable development, with the SDM claiming that "by 2015 the South African mining sector will contribute optimally to sustainable development" (SDM, 2009:9, 15).

At the core of the SDM strategy lies the equitable and efficient harnessing of social and natural capital, along with physical, human, and financial capital in a comprehensive and strategic action plan premised on participatory development approaches with relevant stakeholders (SDM, 2009: vi). This approach to sustainable development thus entails recognising the utility of natural capital in valorising other forms of capital, particularly human capital, through economy sophistication for example, into knowledge intensive avenues – with natural capital serving as *means* to facilitate development in the best interests, of both present and future generations, through capital substitutability (SDM, 2009; Solow, 1993: 168).

According to this view, Solow (1993) claims:

> A sustainable path for the economy is thus not necessarily one that conserves every single thing or any single thing. It is one that replaces whatever it takes from its inherited natural and produced endowment, its material and intellectual endowment. What matters is not the particular form that the replacement takes, but only its capacity to produce the things that posterity will enjoy.
>
> (Solow, 1993:168).

Solow (1993) proposes a national cost-accounting methodology for the measurement of natural resource utilisation and replacement cost, which form the theoretical underpinnings of

the SDM strategy. Solow argues the net-depletion[24] of the finite natural resources and the necessary amount of capital re-investment to compensate for the loss, should be measured by a valuation of the real value of the finite natural resource as an input to production, subtracted against the marginal cost of extraction. This is a slight adjustment to the conventional methodology used by mining industry and State in measuring natural resource reserves and production rates; measuring the net loss of a finite natural resource as a yearly output subtracted from the overall endowment of that finite resource, however, obviously not prescribing a re-investment figure (Solow, 1993:166).

## 2.6. The Fallacy of Substitutability

There are however, several inherent flaws in opting for a "sustainable development" approach premised on capital substitutability. The first concerns accuracy of measurement and valuation of finite natural resources such as coal. As indicated in the peak coal debate at the outset of this study, data on coal reserve measurement are poor. According to the SDM view, time and space are held in a relative static, including the constancy of supply and demand determined by hypothetical resource utilisation scenarios.[25] In addition, this temporal shortcoming extends to the futurity or viability of a finite natural resource in achieving sustainable development through its use either as an energy source, or through mineral beneficiation. This is a process, as will be demonstrated, largely determined by market forces.[26]

Furthermore, Solow's (1993), approach does not reflect upon possible long term negative social and ecological externalities from arising in the extraction and production of finite natural resources. This shortcoming for Padilla (2002), is reflected in conventional cost-benefit measures biased to the interests of the present generation owners' interests, in addition such approaches do not reflect the cumulative costs of numerous operations within an extractive economic paradigm (Padilla, 2002). For Solow (1993), there is an inevitable trade-off between economic progress and ecological degradation; the more progress or catch-up by developing States, the more ecological degradation. The question at hand is how far the pendulum of nature commodification in the pursuit of economic development should swing? This question according to Solow (1993) is a national one (Solow, 1993: 172).

[24]The combination of known finite natural resource reserves and possible future discoveries (Solow, 1993: 168).

[25]See earlier section of this chapter on "peak coal."

[26]Here with reference to the viability of coal against the oil price hike by OPEC in 1973.

This underscores Solow (1993), as well as the SDM strategy's *belief in a "truth"* of finite natural capital substitutability. This view proposes compensation for the loss of a finite natural capital endowment on the assumption of capital reinvestment into forms of human or physical capital (Solow, 1993:166; SDM, 2009:vi). Bond (2006), has illustrated that the World Bank's (2006) *Where is the Wealth of Nations* has acknowledged extraction of natural resources and associated re-investments as not necessarily contributing to net Gross Domestic Product (GDP). Bond (2006), contends that uncertainty still remains on the extent of financial capital returns associated with extractive industries to African countries such as South Africa. The question remains does this result in meaningful re-investment, or does it merely become "the source of further capital flight" (Bond, 2006:78).

Perhaps the greatest misplaced assumption concerning capital substitutability, resides in the explicit notion of natural capital and human capital substitutability, as if disconnected realms. The assumption is best captured by Solow's (1993) totalising views concerning the loss of natural capital, arguing, poor countries have a choice; either in "cooperating in the degradation of their own environment or acquiescing in their own poverty" (Solow, 1993:170). This negates the interconnectedness of social and ecological spheres, specifically negating nature as the "support and active agent" of production (Leff, 1995:13). More pertinently, it takes for granted the most important life support system of all life, namely, *biodiversity* (Bridge, 2004:234; Neumayer, 1998).

The challenge thus resides in shifting the current discourse on sustainability within the context of finite natural capital substitutability premised on "macroeconomic abstractions of sustainability," to a discourse that is historically grounded, recognising the intrinsic value of nature, the rights of communities and the hegemony inherent in development discourse (Bridge, 2004:234). There is thus a need for an approach that pushes beyond the reductionist market valuations of nature and disarticulated notions of cost liability in the so-called discourse of "sustainable development." Bridge (2004) accordingly asserts:

> The reduction of sustainability to a set of management tools that obscure underlying resource and environmental politics has led some observers to argue that sustainable development—initially a call for a new set of development goals—has become the means du jour to the conventional ends of resource access and extraction.
>
> (Bridge, 2004:234).

It is on this basis the study calls for exercising caution against using the concept of development and the sustainability thereof in universal, de-politicised, and often technocratic approaches in dealing with social and ecological outcomes associated with economic development. What is needed is an approach that meaningfully addresses social costs arising from a finite, natural resource-led development. The first step in realising this requires assessing development outcomes through a socio-ecological frame of analysis; an approach which is cognisant of the historical and structural realities of development premised on a fictitious commodity such as coal (See Ferguson, 1990; Escobar, 1995; Peet and Watts, 1996; Polanyi, 2001).

## 2.7. Conclusion

The chapter has illustrated the central importance of the Witbank coalfield to contemporary South African development. Thereafter, the study presented the development paradox associated with the extraction of a finite, resource such as coal, with a specific focus on the projected developments concerning the life-span of the Witbank coalfield. It was within this context that the case study on Rietspruit was introduced along with providing a brief social and economic profile of the colliery, as well as the various steps undertaken concerning the colliery closure and the rehabilitation process. Attention was drawn to the contested nature of development discourse, arguing that it sits within a very specific political economy of knowledge and power, and that attempting to marry notions of sustainable development with extractive natural resource development are misplaced. This set the scene for engaging with State development policy discourse, namely the DME's Sustainable Development through Mining (SDM) programme. The argument was made that the current approach as outlined in the SDM strategy (2009) are premised on false assumptions concerning the exploitation of natural capital as the *means* to achieving sustainable development. The next chapter sets forth by assessing the historical character of South Africa's development, interrogating both the role played by the State and the perceived importance of coal as an agent of (industrial) development.

# CHAPTER THREE: CAPITAL, STATE AND COAL

## 3. Chapter Outline

The following chapter reviews the character of South African industrialisation, specifically interrogating the role of coal mining, alongside social and technological factors of production. The purpose here is to illustrate how fundamentally *interdependent* the commodification of coal has been to the development of State and economy in South Africa. This will be demonstrated through three historical episodes, namely; the discovery of minerals and the development of a working class divided, secondly, the commodification of coal under the development of ESKOM. Thereafter, the chapter underscores the speculative character and outcomes of coal mining development in times of peak demand *vis-à-vis* the mechanisation of South Africa on the back of creating giants such as Rietspruit colliery. The chapter concludes by overview of Rietspruit colliery's post mining sustainability plan and published outcomes.

## 3.1. Setting the Scene

The economic viability of a finite primary resource-led path towards industrial development has long been a hotly contested debate.[27] At the core of the argument lie concerns over the character of linkages between the extractive sectors and non-extractive sectors of the economy, in addition to the "political structures that often develop around resource windfalls" (Bridge, 2004:228; Ross, 1999:6-9). Instead of the State possessing "sufficient autonomy to pursue economic policies that are coherent and that seek to raise social welfare," State development is often held captive by factional interests, which are often predatory in character (Bridge, 2004:228).

Revenue generated from commodity booms are often concentrated in State spending to further accumulation in the extractive industries, which according to Bridge (2004), masks the need for fundamental economic reform (2004:228). This spending is often associated with

[27]According to the resource curse hypothesis, resource based economies are seen as highly susceptible to commodity market volatility, exhibiting reluctance or a lack of, backward and forward inter-sector linkages, as well as declining terms of trade, which negatively impact upon prospects for diversified industrialisation into manufacturing. Resource based economies tend to be parasitic in character, meaning that there is a very limited margin of profit re-investment in the economy, narrow redistribution as well as a high level of concentrated ownership. This often results in a marginal manufacturing sector unable to sufficiently diversify, or for that matter compete as a result of increasing levels of inflation and currency appreciation, on the back of commodity (boom) exporting – a phenomenon also known as Dutch disease (Ross, 1999:3-6-9).

the construction of industrial infrastructure, to create a highly conducive environment for these industries, such as providing cost-effective electrification, in addition to ensuring efficient rail and port linkages – as will be illustrated in the South African scenario. The consequences of such a relationship between State and capital renders the State's functioning beholden to the interest of fractions of capital, instead of championing the social welfare of its citizenry (Bridge, 2004:228; Ross, 1999:3-6, 6-9).

## 3.2. Minerals as Fictitious Commodities in Industrial Development

Inequality is inherent to the social and economic character of modern South Africa. This has been attributed to various historical phases of White minority control starting with the arrival of the Dutch in the Western Cape in 1652, progressing into various phases of increasing formalised racism under British imperial rule in the nineteenth century, and culminating with the formalisation of the apartheid State in 1948-1994 (Feinstein, 2005).

The birth of industrial South Africa however, has its origins in the discovery of minerals; firstly in the way of the Kimberly diamond fields in 1867, and thereafter the discovery of one of the world's largest gold reefs on the Witwatersrand in 1886. This discovery of minerals, especially gold, resulted in a rapid and unprecedented influx of capital and skilled labour entering the South African economy, and it is arguably at this point where the foundations of a modern and industrial South Africa were laid (Marais, 2011:8 Freund, 1998:149-151).[28]

The influx of capital however, led to an exacerbation of existing class tensions between Boer and British, culminating in two Anglo-Boer Wars, with the British claiming victory in the second and most important War (1899-1902). The emerging economy and society of the early twentieth century became characterised as minerals intensive, with State formation occurring as an auxiliary to economic development, resulting in the formalisation of the Boer republics and British colonies into a Union in 1910 (Feinstein, 2005:114; Freund, 1998:149-151).

The outcome of this political and economic victory was the development of an "accumulation strategy centred on mining," housed in a newly formed State, initially imperial in orientation, however, consolidated nationally over the course of the twentieth century, in what has come to be known as a minerals-energy-complex (MEC) (Fine and Rustomjee, 1996). The significance of this victory, and in particular the domination of the mining fraction of capital

[28]It was at this point that the South African economy was integrated into the world market economy, attracting international investors' attention from London, New York and Berlin.

in this alliance, would throughout the twentieth century co-opt the State to champion its interest under the mantra of modernisation and progress (Marais, 2011:8; Fine and Rustomjee, 1996; Christie, 1984:1; Kaplan, 1976:73).[29]

The burgeoning minerals economy was however, contingent on two key inputs necessary for viability; the monopoly control of a cheap African labour force, and the development of a subsidised and centralised industrial infrastructure necessary to facilitate extractive production. This culminated in the development of a rail network and eventual electrification of the economy by means of coal (Marais, 2011:8; Christie, 1984:1; Alexander, 2008:48).

The high level of congruency between State and capital would however, from the outset pose several development paradoxes manifested in periodic and escalating *crises*, unduly impacting upon African society. At the nucleus of this strategy, was and is, the externalisation of socio-ecological costs of production through the continued appropriation, and subordination of nature and labour, tightly bound to the development of a minerals and energy economy. It was on this foundation that the industrial accumulation strategy for South Arica was founded – through subsidising the cost of production by undervaluing the true costs of *coal* production (Adler et al, 2007:34; Polanyi, 2001; Fine and Rustomjee, 1996).

## 3.3. Embedding Inequality

The effective control of labour from the outset posed a significant challenge for industry owners and State as a result of robust pre-capitalist relations existed alongside the nascent mineral market economy in the latter part of the nineteenth century. A series of *Acts*[30] aimed

[29] It can be noted the agricultural sector was congruent with the accumulation strategy centred on mining by way of post Anglo-Boar War (1899-1902) political enfranchisement of Afrikaner elite; however this arose as a result of mine owners' recognition of the need for domestic food production to minimise operational costs on the mines, thus forming a so-called alliance of "gold and maize" (Trapido, 1971). Whether the manufacturing sector developed as an auxiliary of mining capital or independently as a manufacturing fraction of capital has been debated by way of the Poulantzian fractions of capital hypothesis; articulating the reproduction of capital through the various "fractions" of interest "at the level of relations of production" (Kaplan, 1976:73). The debate can be settled in the post Depression period on the back of the gold price hike; with mine ownership according to Freund (1998), taking "a more broad ranging view of capitalist development in South African industry," diversifying their interest across primary, secondary and into the service sectors of the economy through establishing mining "finance houses" (Freund, 1998: 160; Fine & Rustomjee, 1996: 100).

[30]The *1894* Glen *Grey Act* sought to limit the area on which Africans could establish new farming operations, whilst attempting to set the parameters for the development native reserves. Followed by the notorious *1913 Land Act* which effectively reserved 7, 3 per cent of land for Africans in designated reserves. This was increased to 13,7 per cent under the *1936 Native Trust and Land Act* in a bid to prevent influx into "White areas," as conditions in the reserves deteriorated significantly. The culmination of African subjugation followed the passage of the *Native Authorities Act of 1951* and the *Promotion of Bantu Self-Government Act No. 46 of 1959* under the apartheid era (Mbongwa *et al*, 1996: 40, 46, 47, 52; Marais, 2011:9; Feinstein, 2005:45).

at controlling and proletarianising the African population followed, with the formation of "native reserves," later consolidated into "Bantustans" under the apartheid period, or as Harold Wolpe (1972) described, the formation of reserve armies of migratory labour needed for the mining operations (Feinstein, 2005:45).

These labourers were however, forbidden from unprejudiced participation in the "first economy," and were relegated to an impoverished life in a second pre capitalist economy (Marais, 2011:8; Mbongwa *et al*, 1996: 40, 52; Alexander, 2008:48). In addition to the spatial division of the population through the native reserve system, the division of labour outside of the reserves followed "separating skilled White labour (both immigrant and domestic) from unskilled African labour" (Marais, 2011:9). This division of the "working class" was most apt in workers struggles for better wages through collectivisation by White workers in an imported trade unionism movement, "to fervently defend their privileged status against 'encroachment' by African workers" (Marais, 2011:9).

For Alexander (1999, 2008), this racial division of labour and trade unionism ultimately came to impede upon a true workers struggle for higher wages in the mining sector, and it is here that class divisions within the working class along racial lines were embedded in the political economy of South Africa (Alexander, 1999: 51). This is evident in review of the White worker-led strikes within the gold and coal mining sectors, which followed from 1913 onwards. The strike that stands out was the 1922 strike, initially started by 800 White colliery workers on the Witbank coalfield as a result of reduced wages in the coal mining sector. It eventually spread into the Highveld, with a general strike declared with the addition of 20 000 Rand gold miners (Alexander, 2008:51, 58).

Smuts declared Martial Law, and the 1922 strike lasting from 2 January to 15 March, was brought to a violent end with some 200 lives lost. The failure of the Rand strike as a true workers struggle according to Alexander (1999), arose as a result of the White labour representing an emerging "middle class," comprising of supervisors, mechanics and semi-skilled workers, rather than true "workers." With the conflict arising amongst firstly White colliers and thereafter spreading to White gold miners, as a result of a discrepancy between new found status in South Africa and wages (Alexander, 1999: 39, 40).[31] This explains why

[31]Upon arrival to the colony of South Africa, former miners from Britain were awarded "official" status, which according to Alexander (1999), especially for coal colliery workers, the "status connoted, in particular, respect, job security and higher pay" (Alexander, 1999:40).

White miners did not involve African miners in the strike, as the "gulf" between the two classes was too wide, which according to Alexander, "[s]een in this light the [W]hite collier appears not as a villain, nor as a hero, but as a tragedy of history" (Alexander, 1999:40) [SIC].

## 3.4. ESCOM: Commodification of Coal

Although the coal mining sector experienced fairly rapid development in the period of World War I into the early 1920s, limits to growth of this sector were imposed by State regulation on the pricing of coal, and high rail charges, partly in a bid to ensure profit margins for gold producers remained intact as a result of volatility in the global commodity markets. More specifically however, the price of coal was regulated to ensure the efficient electrification and expansion of the South Africa railways and electrification of the gold mining industry, on which South Africa's industrialisation strategy was hinged (Christie, 1984:52; Lang, 1995:170). The growing importance of electricity to mining and industry was evidenced during the 1922 miners strike, bearing disastrous outcomes for the gold mining sector. This motivated Smuts through the passage of the *Electricity Act 1922* to catalyse the substitution of man with machine (Christie, 1984:52; Lang, 1995:170).

This industrial infrastructure drive was to be facilitated by establishing the Energy Supply Commission (ESCOM)[32] in 1922, under the auspices of the *Electricity Act 1922*, with autonomy from the national treasury, and mandated to operate "along business lines," but sell electricity at "neither profit nor loss" (Christie, 1984:84). The undertaking was led by Smuts' close ally Dr. H. J. van der Bijl, allowing Smuts to guarantee the electrification of the railways, particularly the route between the strategically important Witbank coalfields and the gold mines on the Rand, in addition to the route between the Natal coalfields and the Port of Durban (Christie, 1984:84, 89). It is in this period according to Freund (1998), that one can talk of the development of a Minerals and Energy Complex (MEC) (Freund, 1998: 160; Fine and Rustomjee, 1996).

Controlling the Witbank coalfield and the electrification arising from that coalfield became a core focus for the State. Prior to establishing ESCOM, the Victoria Falls and Transvaal Power Company Ltd (VFTPC) had been the principal supplier of electricity to the gold reef and had expressed interest in the construction of a power station in Witbank, which would

[32]ESCOM in 1922 later becoming ESKOM under apartheid.

have essentially monopolised and privatised electricity supply in the Transvaal, including supply to the gold mines and railways (Christie, 1984: 89).

A compromise however, was reached between the State and the VFTPC: Under the deal, ESCOM would own the power station in Witbank, but VFTPC would undertake the construction and management thereof. The power station in question was completed in Witbank in 1926, with ESCOM selling electricity from the power station in bulk to the South African Railways (SAR), collieries and industry in the Witbank and Johannesburg area. Surplus electricity was purchased and resold by the VFTPC to the gold mines on the Rand (Christie, 1984: 87, 92). By 1940 the VFTPC was purchasing and distributing 80 per cent of the electricity from the Witbank power station to the gold mines on Rand, which according to Lang (1995), marked the first period in South Africa's history where the gold mines and industry had a more than adequate, or surplus electricity supply (Lang, 1995:105).

It was thus during this period that saw the expansion of coal mining operations to meet the renewed demand for electricity, in addition to varied industrial applications, with the *Financial Times* of London on the 23 October 1933 reporting on the potential yielded in coal:

> *Gold Mining is so overwhelmingly the dominant industry of South Africa that coal is apt overlooked. The coal deposits of South Africa....in the opinion of many competent judges form by far the most important asset of its natural mining wealth.*
>
> (in Lang, 1995:121).

## 3.5. The Witbank Coalfield and the Mechanisation of South Africa

After World War II, and the ascension of the Nationalist Party to office in 1948, the distinctions between State and capital became increasingly blurred. This was evidenced with State revenue absorbing 57 per cent of the total profits from the mining sector through taxes and levies imposed during the interwar period, in addition to the State controlling numerous corporations under the Industrial Development Corporation (IDC) (Adler *et al*, 2007:34; Christie, 1984:142, 143).[33] However, the true collaborative partnership between State and capital was to manifest in the energy economy, centred on coal. Expanding the electrification

[33]In addition to controlling the South African Railways and Harbours, the State controlled numerous marketing boards in the agricultural sector, in addition to the IDC establishing and owning companies such as FOSKOR (fertilisers) and SASOL (in Afrikaans, *Suidafrikaanse Steenkool en Oilie Maatskapy Beperke*) (Christie, 1984: 143).

capacity of the national grid was at the core of this strategy, facilitated by the mechanisation of coal mining, centred on the Witbank coalfield (Christie, 1984:180).

With increasing State totalitarianism premised on racism, the State found itself increasingly isolated from access to external energy and commerce markets. Domestic energy concerns became a pressing issue for the apartheid State, in addition to maintaining competitiveness in the mining and industrial sectors. The State through its IDC arm responded with a number of strategic partnerships to alleviate growing pressure. Amongst the first of these was the IDC partnering with mining capital to develop the Nazi era Fischer-Tropsch technology of coal-to-liquid fuel processing under the SASOL brand, starting with the first plant in 1951 (Banks, 2007: 250).

The true viability and importance of coal and the technological development of the SASOL operations however, only manifested as a result of the fourfold increase in oil prices in 1973 by OPEC, resulting in re-fortifying the viability of coal as a primary energy source (Banks, 2007: 250).[34] It was in this phase that the State undertook a significant expansion drive for increasing the capacity of the national power grid. This period witnessed the up-scaling of electrification capacity from 2400 MW at the end of the 1950s to 15 000 MW by the mid-1970s. This was doubled to 30 000MW by the early 1980s, with majority of these new power stations situated on the Witbank coalfield (Christie, 1984: 151; Lang, 1995:137).[35]

## 3.6. The Constructs of a Giant: Rietspruit Colliery

In the context of the OPEC crisis of 1973 that the global and national demand for coal had become insatiable, and South African coal was more than willing to oblige. Markets in Japan, Europe and the USA opened up, resulting in significant capital accumulation within the local coal mining and associated industrial sectors. In the wake of the demand, domestic monopoly capital was solidified through a number of joint export-orientated coal mining ventures with

[34]The fuel embargo against South Africa in the 1980s further catalysed the expansion of SASOL operations that by the early 1980s South Africa was able to achieve as much as 50 per cent petroleum fuel self-sufficiency, with an additional two plants built during this period (Banks, 2007: 250).

[35]In the period 1970 to 1990, the State energy utility, changing its name to ESKOM under the apartheid era, had several large-scale coal-fired power stations simultaneously under construction and commissioning; such as Kriel Power Station (3000 MW) coming online in 1979 (the largest in the world at the time), Matla Power Station (3600MW) in 1974-1983, Duvha Power Station in 1975-1984 (3600 MW) situated on the largest opencast colliery in the southern hemisphere, the Lethabo (3600 MW) (1980-1990), shortly followed by the construction and commissioning of "the world's currently largest (4116 MW) coal fired power station at Kendal in the Mpumalanga province," in the period 1982-1993 – all except Lethabo, situated on the Witbank coalfield (Hartnady, 2010:2; ESKOM web).

multinational energy corporations: The likes of BP, Shell and Total Oil assisted significantly in the (re)capitalisation, and introduction of new mining technologies in South Africa.[36] The introduction of dragline mining specifically within the opencast coal mining sector on the Witbank coalfield revolutionised the South African coal mining sector in the 1970s, from production philosophy to production scale, marking a point of departure within the industry (Leger, 1991:135). And it was here that Rietspruit colliery's realisation was the product of one such partnership between Shell and local mining interest Barlow Rand; starting production in 1976, targeted at the coal export market of Europe (Leger, 1991:137; RMS, 2002).

### 3.6.1. The Mine as a Commodity

Rietspruit colliery also known as Rietspruit Mine Services (RMS), had since its inception been a joint-run operation, with one operational partner and one silent partner, with BHP Billiton and Xstrata the current joint partners. The mineral rights for Rietspruit were initially acquired in 1941 by the Manhattan Syndicate Limited, a wholly owned company of the Transvaal and Delgoa Bay Investment Company Limited. The Manhattan Syndicate including the mineral rights for the site that is Rietspruit were later acquired by Barlow Rand Limited in a joint partnership with Shell South Africa in 1974 (RMS, 2002).

Technological innovation such as the use of draglines at Rietspruit were central to its success: By 1974 more than a dozen draglines were on order for South Africa, with Rietspruit colliery taking delivery of three of these at the start of production in 1978 (Christie, 1984:179; RMS, 2002) (see appendix 1 for dragline in operation). Opencast operations such as Rietspruit colliery could open within 2 years, guarantee high extraction rates of 90 per cent, and required only a third of labour compared to underground operations. This was particularly attractive with mounting discontent amongst African labour. The "dragline bucket had a design capacity of 50m³....produced a total output of 2.9 Mt per year!" – amounting to 35 per cent of total production by 1986 (Leger, 1991:135).

It was here that the Witbank coalfield was to play its historically "destined" role: Not only did it possess vast seams of high grade coal, but it was extremely accessible, sitting at an

[36]Technology transfers in exchange for joint ownership was best epitomised in State owned Gencor's 40 per cent share offer in Optimum Colliery to MacAlpine Dragline Company – in exchange for technical support associated with the introduction of dragline mining in South Africa (Leger, 1991: 135,137).

average of 15-50m below the soil, rendering it highly suitable for dragline mining, and securing South Africa's place in the coal export market by "producing amongst the cheapest [coal] in the world" [sic] (Leger, 1991:154). Figure 1 below, illustrates the geo-structural character of the Witbank coalfield and its conduciveness for highly mechanised opencast coal production using draglines.

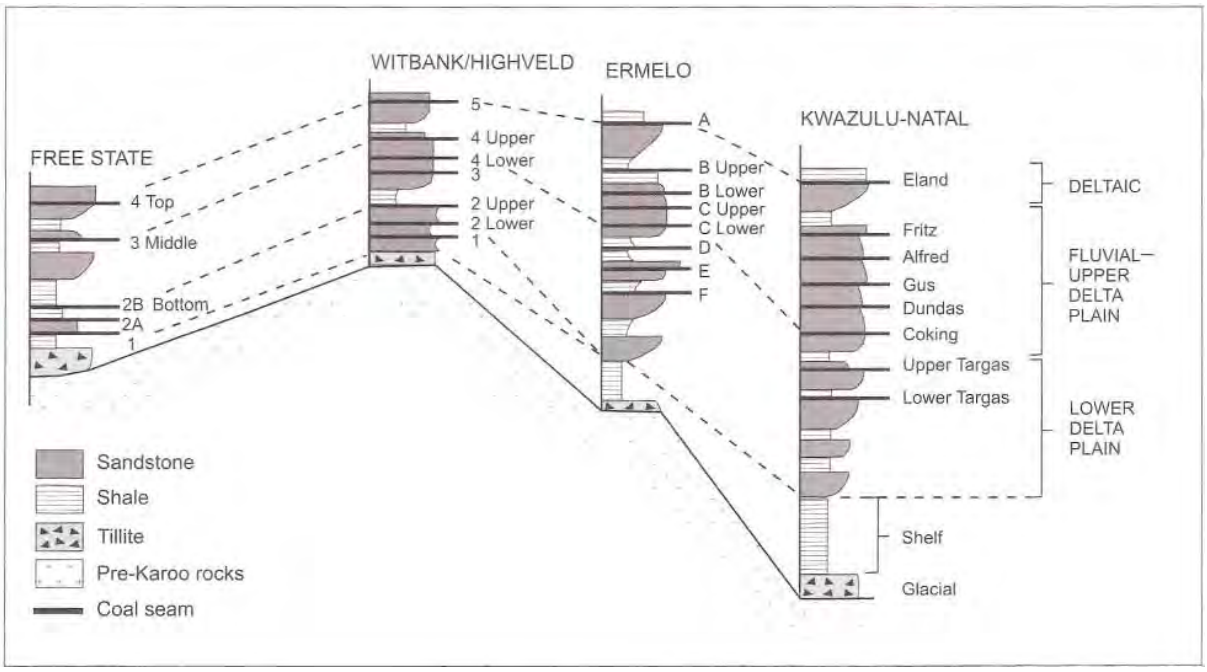


Figure 1: Character the Witbank coalfield (Source: Snyman, 1998:142).

The shift to capital intensive opencast mining was thus made possible by the escalating coal export prices and the introduction of new technologies such as the dragline during the 1970s and into the 1980s (Leger, 1991:135). The expansion of the coal mining sector resulted in extraction increasing from 55Mt to 175Mt in the period 1970 to 1985, with export volumes increasing from 100 000t to 47Mt in the same period (Feinstein, 2005:210, 211). This was largely attributable to the 17 large-scale opencast collieries in operation by 1987, mainly along the Witbank coalfield, and accounting for a third of total production in this period, of which, Rietspruit colliery was one (Lang, 1995:179; Leger, 1991:135; Feinstein, 2005:211).

These developments necessitated significant funding for the upgrading and expansion of rail and specialised infrastructure, such as the development of the Richards Bay Coal Terminal (RBCT) with a direct rail-link to the Witbank coalfield, and Rietspruit in particular. The RBCT was completed in 1976 designed to handle 9 Mt per year, further expansion in 1978 followed for an additional 20Mt, and again in 1987 to handle 48-52 Mt. With current capacity at 91Mt is a clear indication of how rapidly South African coal exports grew, with South

Africa becoming the 3 largest exporter of coal in the world within a 20 year period (1970-1990) (Leger, 1991: 136, 137).

### 3.6.2. Valorising Natural Capital

On the production side, Rietspruit colliery featured highly in South Africa's coal export market, as a result of its high grade coal and being one of the first collieries in South Africa to employ draglines, averaging circa 4, 5 Mt per year of export grade coal in its 26 years of operation. By October 1978, the first coal ready for export had been railed to the Richards Bay Coal Terminal, destined for the European coal-fired power station market (BBC Web, 7 November 2001).

By 1981 it had three draglines in operation in a bid to achieve forecasts of 6Mt of export grade coal per year, and had earned R300 million in foreign currency of that year (RMS, 2002; Lang, 1995:179; Singer, 2010:131). With an operating lifespan from 1974-2002, Rietspruit colliery produced a total ROM of 195, 970, 320 Mt from both opencast and underground workings, of which, opencast contributed a total ROM of 167, 838, 146 Mt (RMS, 2002).

### 3.6.3. Housing for the People?

The political and economic legitimacy within the State during the period of Rietspruit colliery's establishment (1974-1980) however, had all but disappeared.[37] By the end of the 1970s, due to increasing political isolation, foreign lines of credit became progressively difficult for the State to access. In addition labour market volatility compounded the growing instability, resulted in the post World War II accumulation model premised on racial Fordism having reached its limits (Gelb, 1991).[38]

[37]A series of domestic and international political and economic developments followed in this period, summarised here briefly as: In the period 1971-1985 the ratio of wage disparity between African and White miners decreased "from over 15:1 in 1970 to 8:1 in 1975 and 5:1 in 1985" (Feinstein, 2005:207; Christie, 1984:176). Further definitive moments such as the Soweto massacre of 1976 brought on widespread international condemnation, resulting in international isolation and significant capital flight as international investors turned their backs on apartheid South Africa (Gelb, 1991; Feinstein, 2005:229).

[38] Fordism refers to the production philosophy espoused by Henry Ford, and premised on the division of labour in manufacturing to ensure maxim productivity. Racial Fordism became the post World War II growth strategy of the apartheid State, attempting both sophisticated industrialisation of the economy into consumer manufactures. The growth model was hinged upon ensuring the division of labour along racial lines, whilst also ensuring the living standards of Whites increased to a position "similar to advanced countries." African living standards however, increased extremely slowly, rendering most impoverished. The growth model built on inter-war industrialisation gains, facilitated by exports of gold and precious metals, and the stability of these

It was in this context that Rietspruit colliery had to guarantee its labour force and it did so by marketing itself as an equal opportunity mine and constructing what was considered the most modern mining village in South Africa at the time (RMS, 2002). Attracting skilled African employees would be central to Rietspruit's success in a volatile period, with the management stating that it would "provide formalised training to develop managerial as well as supervisory skills for all personnel" (RMS, 2002).

This however, was no gesture of goodwill on the part of mining capital, but should rather be seen in light of transition from a migrant labour model to an internal labour model, or "internalisation" as coined by the International Labour Organisation (ILO) at the time (Crush, 1995: 18). This as a result of historic external sources for migrant labour such as Malawi and Mozambique cutting ties with the apartheid regime. Malawi recalled 120 000 miners in 1974 and Mozambique followed suit by reducing its miners from 97 000 to 35 000 after Frelimo took to power in 1975 (Crush, 1995: 18).

In addition, Shell Coal the 50 per cent shareholder in Rietspruit colliery and responsible for marketing of Rietspruit's coal internationally, had faced mounting opposition internationally for its dealings with the apartheid State. As a result of international and domestic pressure, Rietspruit colliery was the first coal mine in South Africa to sign an agreement with the National Union of Mine Workers (NUM) in 1985 (Walker, 1986; ILO, 1986:10; Leger, 1991: 137). One year later, pass laws were repealed "and rights to permanent urban residence became dependent on access to approved housing" (Laburn-Peart, 1995: 38)

It was within this context that the construction of houses for African workers at Rietspruit followed alongside their White counterparts, in what was considered an anomaly in the industry at the time. "This meant that for the first time South African mineworkers could legally settle with their families in the townships close to the mines," or in the case of Rietspruit, co-habit in family homes alongside their White counterparts (Laburn-Peart, 1995: 38). Building on this premise the accommodation for African workers at Rietspruit consisted primarily of 2-3 bedroom family homes for married employees and their families, in addition to dormitories for single employees. Furthermore, African employees had access to their own

commodities on the world market. The stability of the gold price was central to this growth model, thus by the mid-1980s, as a result of the price of gold falling by 50 per cent, compounded by a stable dollar price, and rising wages amongst Africans, the viability of the growth model was fundamentally compromised (Gelb, 1991:2).

amenities such as a recreation club, rugby and soccer fields as well as community hall, on a par to their White colleagues (RMS, 2002).

By 1986 saw the introduction of "housing schemes" by South African mining capital for African miners aimed at creating African home owners in urban areas. However, housing schemes were met with partial success due to amongst other things, a residual racialised and paternalistic model of social control was evident in the "planning ethos and power structure," relating to house location, price and extent of socio-economic dependence (Laburn-Peart, 1995: 38).

At a more superficial level, the racialised spatial planning could be found in the spatial layout of "town planning." For example at Rietspruit village, White miners occupied the "upper" village, atop a hill, away from the colliery operations, whilst African miners occupied the "lower" village, situated alongside the slurry dump and in close proximity to colliery operations. Furthermore, houses for African workers were substantially smaller than those of their White counterparts, in addition to comprising of rudimentary finishing (Drewes and van Aswegen, 2008:25; RMS, 2002).

## 3.7. Mine Closure and the Social Labour Plan

It is with this context that the study aims to shift the debate to the proverbial *coalface*, by exploring post-coal-mining outcomes for the village of Rietspruit, specifically within the historical context of commodification and dependence on coal in South Africa. More specifically, the study will assess Rietspruit colliery's post-mining sustainable development strategy, known as a "high road" social labour plan (SLP), tasked with ensuring sustainable post-mining development outcomes for its former employees, as per the MPRDA 2002 and its accompanying Mining Charter.

Mine management claimed to have initiated a closure strategy 5 years prior to closure, which comprised of the SLP, tasked to address all socio-economic aspects of mine closure. The SLP strategy entailed two phases: Phase one consisted of identifying "groups within the community and obtaining their support" prior to mine closure with a transitional community forum established, resulting in the establishment of the Rietspruit Community Development Forum (RCDF). The RCDF was said to represent 12 groups in the community, with an executive representative, however, "not holding any operational responsibility" for the implementation of the SLP (WCI, 2002).

Phase two of the SLP strategy commenced on the cessation of mining in May 2002, and entailed implementing a business development model, premised on the sale of houses from the mine village to retrenched workers at subsidised rates. The proceeds from the houses were to be channelled into a Section 21 (non-profit) holding trust, with so-called "quick-win" small-medium-micro-enterprise (SMME) projects identified for the purposes of ensuring early community buy-in into the SLP. SMME initiatives such as spinach tunnels, meat processing and textile manufacturing were identified and implemented. These projects however, failed in the initialisation phase on the basis of poor management and buy-in from the local community. Widespread allegations of nepotism and corruption surfaced, with many of the key stakeholders in these projects disappearing with proceeds (BECSA interview).

It was also proposed that large-scale import-substitution-industrialisation projects, underpinned by an export orientated business model, were to come online to ensure the long term sustainability of the village. Various enterprises such as plastic moulding and the possibility of establishing an export processing zone (EPZ) in the area where identified. None of these projects materialised with mine management refusing to finance initiatives as this fell beyond its core business function (WCI, 2002; Limpitlaw, 2004:7; SLP Contractor interview).

The institutional structure and vision of the SLP is outlined below:

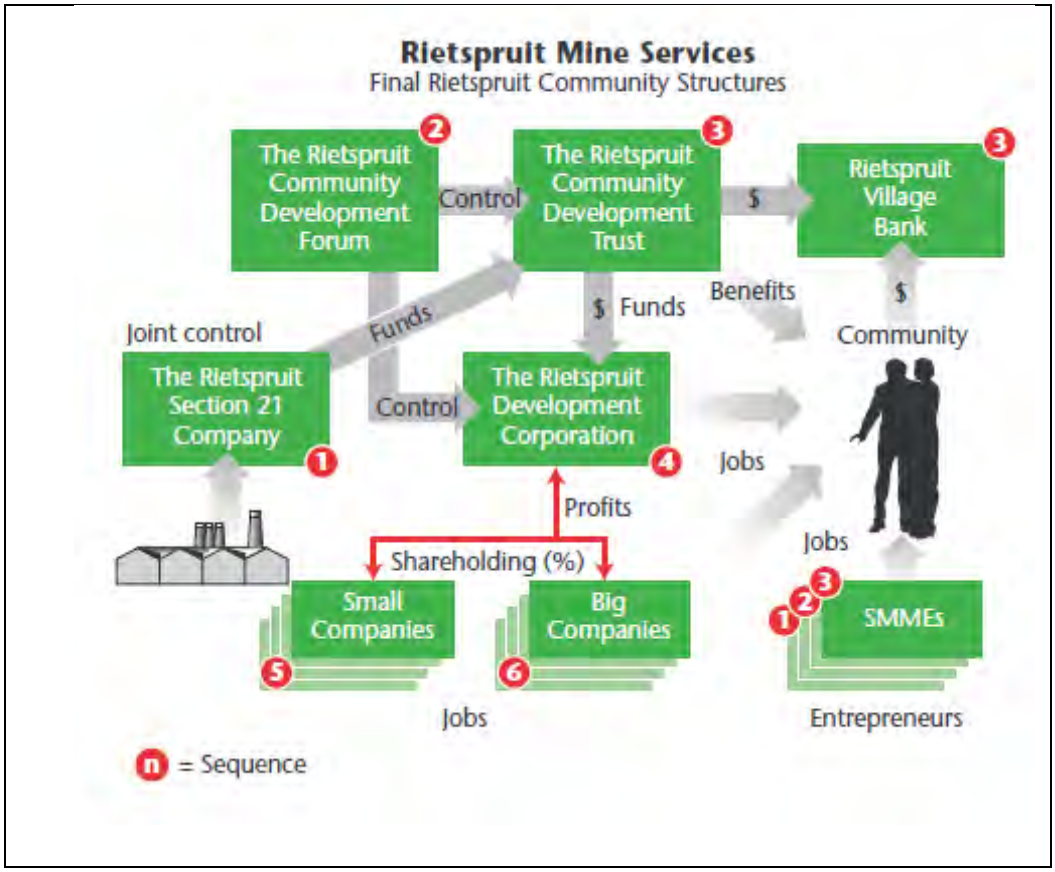


Figure 2: Rietspruit Social Labour Plan Institutional Structure (Source: WCI, 2002).

In reality, as the *Coaltech Report* (2010) has illustrated, Rietspruit and its post-mining SLP has been a dismal failure, citing weak stakeholder participation by mine management: Failing "to effectively comply with the socio-economic assessment and stakeholder engagement procedures recognized globally as critical pre-requisites for best practice closure" (Coaltech, 2010:21). At the core of the problem concerned the fact that the "community assessment" undertaken by mine management was inadequate, using "unreliable statistics and estimates about socio-economic conditions around the mine." This set vague and unrealistic goals and expectations, which "did not reflect the true situation," resulting in failing to achieve the outcomes set for the community (Coaltech, 2010: 21, 22).

Stakeholder engagement with the interested and affected parties was inadequate and too late, occurring only after the social plan had been finalised. At the crux of the matter, was the fact that "*socio-economic closure planning was not integrated in the mine life-cycle but only commenced once the decision to close was taken*" (Coaltech, 2010: 21, 22) (emphasis added).

## 3.8. Conclusion

The relevance for presenting the historical development of industrial South Africa was intended to serve three purposes: The first part of the chapter sought to illustrate the significance of the manner in which coal was commodified and inserted alongside labour, particularly African labour, upon the discovery of minerals. The argument was made that the discovery of minerals led to the embedding of inequality, splitting the working class along the lines of race and impeding upon a true workers struggle. The second part of the chapter aimed to illustrate the historical collaborative role played by the State in legitimating the commodification of coal on the grounds of *necessity*, in particular from the Witbank coalfield, through the creation of ESKOM. Thereafter, the chapter illustrated the utility of coal as a "fictitious" commodity exploited particularly during commodity booms such as the post-1973 OPEC crisis. This has resulted in the creation of collieries such as Rietspruit colliery, with its accompanying village, as a particular capital and social project. The core aim of this project was natural capital valorisation through innovative, technological and social interventions – with reference to the introduction of highly mechanised mining model and accompanying housing model for a destabilised African labour force. The chapter concluded by outlining the rationale and outcomes of the post mining sustainability plan or social labour plan (SLP), envisioned by the mine management of Rietspruit.

# CHAPTER FOUR: RESEARCH METHODOLOGY

## 4.1. Research Methodology

Due to the complex nature of the mine closure at Rietspruit, the study has adopted a *narrative* approach to facilitate discourse development, applied here in a social-interactive manner, allowing the development of multiple stakeholders' voices and discourses pertaining to Rietspruit's SLP to be heard unfiltered (Hajer, 1995:54). A key informant stakeholder approach was thus adopted in the study, identifying "key" individuals involved in either past or present negotiations with matters pertaining to post-mining outcomes at Rietspruit. Key stakeholders in this context became participant voices. Furthermore, written documentation in the form of a memorandum served on the mine owners by the RCDF, as well as the response by the mine's lawyers was utilised to frame the research. In addition to the document version of the SLP, a record of township proclamation, which included the terms and conditions of township proclamation between the mine and the State, as well as one email interview forms part of the discourse analysed.

The rationale to analyse discourse from this position is to "investigate the boundaries" between the so-called legitimate and illegitimate positions, which allows for revealing the relative *position*, *power* and *agency* of participants, within the socially constructed world. In addition, it allows for reflexive and nuanced empirical interpretation of collated data to follow, which according to Alvesson and Sköldberg, (2000), is achieved in two phases:

1.) The first concerns the "data-constructing" phase where observation, discussion and preliminary problematisation of the empirical subject matter occur.
2.) This is followed by a phase entailing systematic interpretation "guided by ideas that can be related to academic theories," including personal theories. This is also known as the "interface stage," where the theory "allows the consideration of different meanings in empirical material," even though certain interpretations are "given priority," the space is nevertheless created for other interpretations to manifest during the course of the research process.

It is on this basis that reflexivity entails a process, or flow of reciprocity between the researcher and the empirical material (Alvesson and Sköldberg, 2000: 249, 250).

On this basis participant selection was premised on a purposive sample rationale, with the criteria mandating a multi-stakeholder "perspective" to ensure the representation of positions and countervailing positions by various stakeholders interviewed. The sequence for the interview schedule was unstructured and followed on a "first available, first interviewed" basis. This allowed for a "natural" dynamism to data collation, in addition to ensuring rigour as dominant themes manifested from divergent stakeholders.

Interviews conducted were conversational in tone and semi-structured with the sample comprising of a cross-section of stakeholders identified on the basis of "authority" in the respective spheres within the research context, namely State, industry and civil society, which included environmental non-governmental organisations. The informal conversational tone and semi-structured nature enabled the researcher to "facilitate" the interview process, seeking the "subjects" to become "participants," thereby enabling an environment to generate multiple meanings, which would be tested against the theoretical positions adopted at the outset of this study (Alvesson and Sköldberg, 2000: 273).

## 4.2. Research Site and the SLP

The research locus, Rietspruit village, was selected as an ideal research site for several reasons: The primary motivation concerns the fact that it is situated on the Witbank coalfield, within the Emalahleni Local Municipality (ELM), and since May 2002 the colliery ceased production (RMS, 2002). Further investigation revealed that a unique post-mining social sustainability plan, or "social labour plan" (SLP), had been envisaged and implemented by the mine owners, premised on ensuring the socio-economic and ecological sustainability for the once considered, model mining village in a post-mining setting. A desktop review revealed that the outcomes of the SLP were extremely contested. Industry reports in the public domain as late as 2007 hailed Rietspruit's closure and the social plan a national and international success in post-mining sustainability. Whilst at the same time, the *Laduma Report* (2007) and the *Coaltech Report* (2010) revealed exceedingly high levels of poverty and unemployment as high as 65 per cent in the community. The core issue concerned the proposed sale of houses by the mine owners to retrenched African employees, with little prospect of these employees being re-employed, in addition to having to start paying for municipal rates and services.

On this basis, the study notes that the term "community" is contested. The *Mineral and Petroleum Resources Development Act* (2002) uses the phrase "interested and affected

parties" with reference to mining related economic activity, the study subscribes to this definition and it is within this context that the term "villagers" is used.

## 4.3. Research Objectives

The research aim was identified as follows, with each objective equal in importance:

A. To analyse the social outcomes of coal mining for the village of Rietspruit.
B. To explore the character of productive relations within Rietspruit, specifically within a post-coal mining context and notions of sustainability and capital substitutability.
C. To analyse the extent of a possible disjuncture between theory and State policy concerning "sustainable development," legislation and practice, or the lived experience evident in Rietspruit.

(See appendix 2 for a sample of key informant interview questions).

## 4.4. Research Process: Key Stakeholders and Process

The Rietspruit SLP framework initially facilitated the stakeholder approach, identifying initial key stakeholders in the development and factors contributing to the failed implementation of the SLP at a desktop research level. As Grimble (1998) notes, there is no blueprint for stakeholder analysis, the development and execution of the stakeholder approach is followed by the following steps:

1. Clarify objectives of the research process

2. Place issues in a systems context

3. Indentify decision-makers and stakeholders

4. Investigate stakeholders interests and agendas

5. Investigate patterns of interaction and dependence (possible conflicts and compatibilities).

(Grimble, 1998:5).

This stakeholder approach facilitated the first of two field trips to the research location where contact with villagers was made and informed discussion concerning the failed SLP ensued. The research scope was outlined to all participants, with a schematic printed scope/outline at hand. During this phase of the research process, detailed observation and field notes were made, including eliciting the contact details of key stakeholders not present at the time. The rationale was to build trust within the village, albeit in a limited time frame, in addition to allowing an initial abstract interpretation of the research site and possible research themes.

A second field trip to the region circa one month later followed in which all but two key interviews were conducted. This entailed staying in the region for a two week period for purposes of scheduling and conducting qualitative face-to-face interviews with key-stakeholders. During this period, interview scheduling took place on the basis of participant availability; the schedule and stakeholder profile is described in the table below:

| **RESPONDENTS** | **METHOD, LOCATION** | **DATE of INTERVIEW:** | **STAKEHOLDER PROFILE and TITLE:** |
|---|---|---|---|
| SLP Contractor | Email questionnaire | 13 March 2011 | Male: External contractor hired by mine for the development and implementation of SLP. |
| BECSA | Face-to-face, recorded, Rietspruit. | 22 March 2011 | Male: Mine representative integrally involved in closure process *vis-à-vis* assets disposal. |
| RCDF A (Focus group interview) | Face-to-face, recorded, Rietspruit. | 23 March 2011 | Male: Group interview with Rietspruit Development community Forum (RCDF). Rietspruit villager, senior member (RCDF) engaged in social justice *vis-à-vis* eviction, failed SLP outcomes and retrenched employee. |
| RCDF B (Focus group interview) | Face-to-face, recorded. Rietspruit. | 23 March 2011 | Male: Rietspruit villager, senior member (RCDF) integrally involved in closure negotiations, retrenched employee. |
| RCDF C (Focus group | Face-to-face, recorded. | 23 March 2011 | Female: Rietspruit villager senior member (RCDF) engaged in closure negotiations, social justice *vis.* evictions, failed |

| | | | |
|---|---|---|---|
| interview) | Rietspruit. | | SLP outcomes and retrenched employee. |
| RCDF D (Focus group interview) | Face-to-face, recorded. Rietspruit. | 23 March 2011 | Female: Rietspruit villager, member (RCDF) engaged in social justice *vis.* eviction and failed SLP outcomes, retrenched employee. |
| RCDF E (Focus group interview) | Face-to-face, recorded. Rietspruit. | 23 March 2011 | Male: Rietspruit villager, member (RCDF) and retrenched employee. |
| NUM/ANC ward chair[39] (Focus Group interview (2) | Face-to-face, recorded, Rietspruit. | 29 March 2011 | Male: Former chairperson of NUM at Rietspruit, integrally involved in closure negotiations. In addition, current ANC ward chairperson and incumbent councillor. |
| Villager 1 (Focus Group interview (2)) | Face-to-face, recorded, Rietspruit. | 29 March 2011 | Male: Rietspruit villager and retrenched employee. |
| EWT | Face-to-face, recorded. Ermelo. | 1 April 2011 | Female: Endangered Wildlife Trust (EWT): Representative. Involved in environmental protection/ preservation and social justice *vis-à-vis* coal mining. |
| DHS | Face-to-face, recorded. Emalahleni | 4 April 2011 | Male: Senior civil servant (Director) in the Dept. of Human Settlements (DHS) integrally involved in the closure negotiation process with mine management. By virtue of stakeholder approach, this participant can be seen as principal State representative. |
| FSE | Telephonic, recorded | 4 April 2011 | Male: Director, Federation for Sustainable Environment (FSE), involved in social and environmental justice issues *vis-à-vis* coal mining. |
| NPA | Face-to-face, Ermelo | 11 April 2011 | Male: National Prosecuting Authority (NPA) official engaged in prosecuting contravening coal mines in the Ermelo region. |
| Participant 14 | FAILED; refusal | FAILED | Female: Current presiding councillor at Rietspruit. |

[39]The interview with the ex-NUM chairperson at Rietspruit essentially comprises of two interviews, with reference to the individuals role during the negotiations of mine closure as NUM chairperson at Rietspruit colliery, and thereafter as ANC ward chairperson and incumbent councillor of Rietspruit, with local municipal election taking place on 18 May 2011.

| | | | |
|---|---|---|---|
| Participant 15 | FAILED; refusal | FAILED | Male: Mine Corporate Social Responsibility liaison officer at Rietspruit. |

Table 1: Interview schedule and participant profile.

In total there were eight successful interviews comprising of thirteen participants, in addition to two interview refusals; five face-to-face interviews; two group interviews with seven participants (five and two); one telephonic interview, and one email interview. All the face-to-face interviews and the telephonic interview were recorded with verbal and written informed consent of the participant obtained prior to the recording of the interview. (See appendix 3 for copy of informed consent).

The face-to-face interviews comprised of individual as well as group interviews; individual interviews elicited a greater sense of confidentiality concerning sensitive data which otherwise would have been susceptible to censorship. Group interviews on the other hand proved to be extremely insightful in that it allowed the researcher to "observe the processes of consensus and disagreement," which became a key data generating avenue concerning the RCDF group interview (Gaskell, 2000:48). A further key facet to the research process concerned village observation and field notes obtained by jointly walking with RCDF village members through the village after the interview, to document relevant aspects pertaining to the study.

In addition, the study consulted with external actors for purposes of reflexivity. Personal communication with an anonymous industry representative, two environmental organisations, as well as a national public prosecutor (NPA) working within a coal mining context, were identified for interview to elicit trends and/or juxtapositions related to the socio-ecological outcomes associated with coal mining. This also served to frame the research within the necessary regional and legislative context.

## 4.5. Results and Interpretation: Political Economy of Knowledge and Power

Recorded interviews were recorded on a digital recorder, with detailed and accurate transcriptions made by the researcher. The discourse analysis approach adopted for the study was not concerned with the particularities of language, but was rather concerned with capturing and analysing multiple stakeholders' voices, heard unfiltered, and situated within a specific political economy of knowledge and power. Thorough analyses of the transcribed

interviews, the stakeholders' voices were subdivided into three natural occurring themes, or "sub-economies" of knowledge and power, which emerged during the research analyses phase. The graphic below indicates the political economy of knowledge and power, identifying the stakeholders within the discourse economies they occupied, whilst indicating the dynamics of the research space negotiated during the research process:

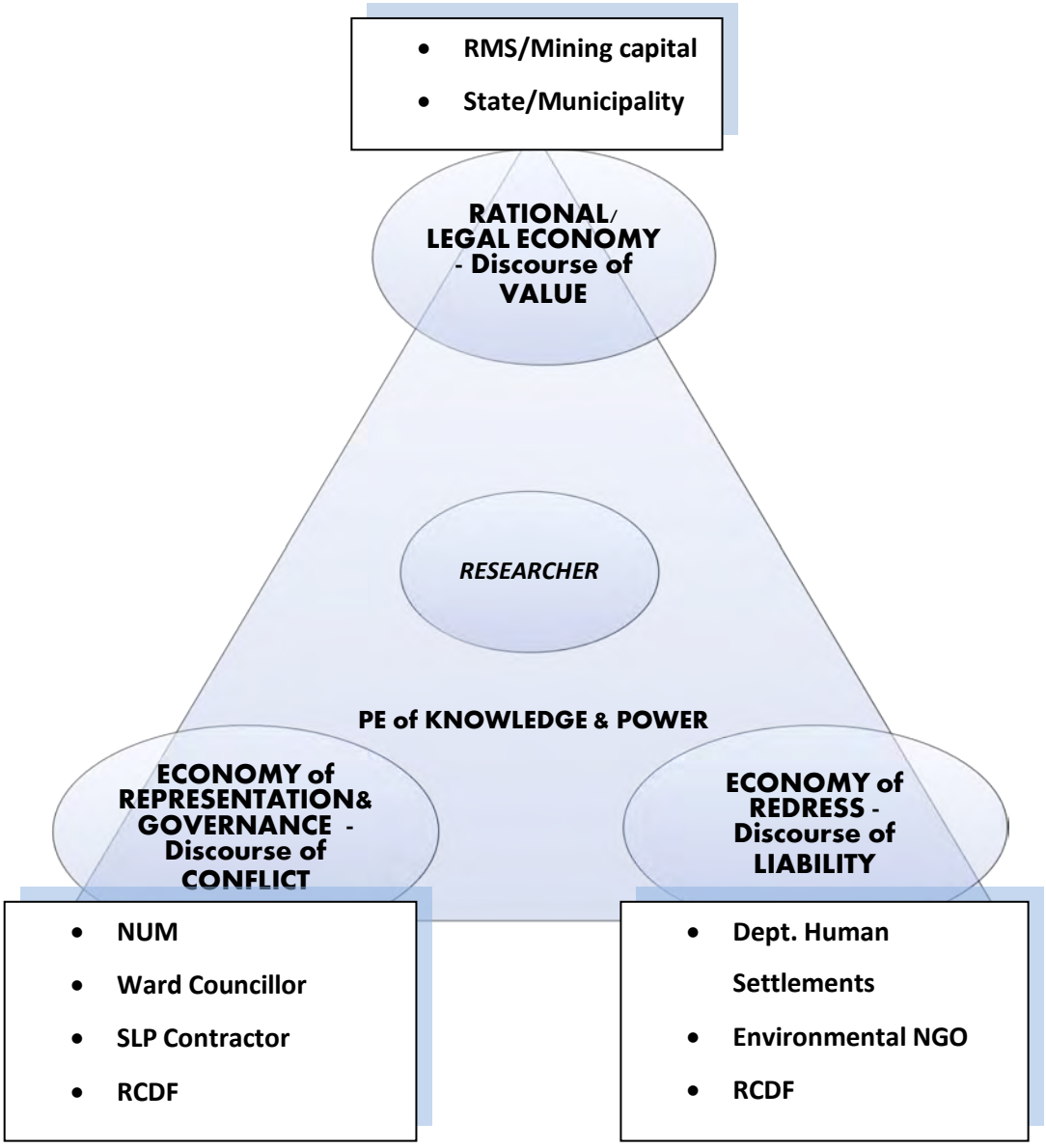



Figure 3: Political Economy of Knowledge and Power (Source: Own)

The data in the results section is presented by way of thematic progression arising from the coding frequency of the qualitative data in addition to adopting a constant comparison approach, where, upon the discovery of new data, constant comparisons are made against existing themes in a bid to find "deviant cases" or new themes (Rapley, 2008:126).

Additionally, the use of direct quotations in the first person, allow the actualisation of the findings so as to avoid loss of meaning or miss-interpretation on the part of the researcher. This allows the participants of the study to become empirical knowledge "language shapers" and active participants, enriching the research process (Alvesson and Sköldberg, 2000: 243).

## 4.6. Limitations to the Study

There were several limitations to undertaking a study of this nature manifesting at the theoretical level as well as the practical level. The primary limitation manifesting at the theoretical level concerned the vague and poorly defined legislative criteria concerning the social and ecological aspects of mine closure evident in legalisation such as MPRDA (2002) – perhaps indicative of the inherent ambiguity in notions of "sustainable development."

Furthermore, there was very little in the way of precedent exploring socio-ecological cost-accounting for post-coal mining communities such as Rietspruit. This was affirmed by the SLP contractor interviewed, revealing that there simply is no "blueprint" mandating the criteria for social aspects associated with mine closure in South Africa. This is evidenced by much of the published data on mine closure biased towards ecological rehabilitation from a mining engineering perspective.

Several data constraints also became evident: The primary constraint concerned the short time window within which "to build trust" with all the stakeholders concerned at Rietspruit. Positioning of the researcher in terms of race and language undoubtedly brought with it uneasiness at times. However, the tension was distilled once the discussion got underway, and the participants were encouraged to develop their own narrative or "story-line" of the process and outcomes associated with the mine closure (Hajer, 1995:54-56).

A further data constraint concerned the lack of space for certain research participants to articulate their thoughts in their mother tongue due to financial constraints. Interview scheduling proved to be critical. Although the study adopted an approach of "first available, first interviewed" this did not allow for strategic sequencing of interviews and resulted in the cancellation of two interviews; a follow up with mine management and the local councillor.

The research was conducted circa one month prior to the local municipal elections of May 18$^{th}$ 2011, thus resulting in certain participants involved in mine closure negotiations and involved in local leaderships positions, being initially hesitant to conduct an interview. This

was evidenced in the group interview with two individuals, with the current ANC ward chairperson stating preference for a group interview, on the basis that he had “nothing to hide.”

# CHAPTER FIVE: FINDINGS

> *...The world's largest diversified mining group, BHP Billiton, has defied the global economic slowdown to unveil record profits...The recently-merged group announced net profits of $608m (£464m) in the three months to September [2001]...In a separate announcement, the company said it was closing the Rietspruit coal mine, near Johannesburg, in South Africa, with the loss of 728 jobs...Although coal reserves are running low at the mine, the company said the decision to close it was an economic one, 'related to the current softness in our main export energy coal markets.' BHP Billiton said it was working with trade unions on a 'world class social plan' to minimise the impact of the closure on the local area...The plan would involve developing non-mining jobs to sustain the economy of Rietspruit Village, it said.*
>
> (BBC Web, 7 November 2001).[40]

## 5. Chapter Outline

The findings are presented as follows: Section one contextualises the development of the *social labour plan* (SLP). The second section explores possible social negative externalities arising in light of the cessation of mining, and the failed implementation of the SLP, particularly within the context of capital substitutability and (post mining) development outcomes.

The findings are presented in line with the methodology adopted for this study, which recognises *power* in *discourse,* in addition to the relevance of *stakeholder voices*, thus allowing the space for subjects in the research process to be active research participants and knowledge shapers. It is not the purpose here to argue the *absolute* validity of claims by participants with reference to the outcomes in Rietspruit, but rather to allow participant voices to articulate their socially constructed world, and in so doing, reveal their position within *the political economy of knowledge and power*. The findings are categorised into sub-economies within the political economy of knowledge and power, representing the research space negotiated by the researcher during the research process.

## 5.1. The Rational Legal Economy: The Discourse of Value

It is particularly insightful to reflect upon how throughout the course of Rietspruit colliery's operational years, South Africa's largest mining houses of which Rietspruit was part of at

[40] http://news.bbc.co.uk/2/hi/business/1642579.stm - retrieved 2nd July 2011.

various stages of its life, rationalised operations for purposes of administrative and financial expediency. This was particularly evident under Ingwe Collieries holdings including Rietspruit colliery, in 1994, separating land or surface holdings into one company, and minerals and mining rights into another company.[41] In a somewhat similar way as to how the surface and underground holdings have been detached through the operational rationalisation, the findings explore to what extent the social aspects of mine closure have been disarticulated from mine production, ownership and rehabilitation *liability*.

### 5.1.1. Rationalising the Social Labour Plan (SLP)?

As will be demonstrated below, there is a significant body of evidence indicating the "social labour plan" (SLP) was the outcome of capital rationalising mine closure as cost effectively and efficiently as possible. This has ultimately facilitated the State to play its historically defined role alongside mining capital, rather than safeguarding the interests of civil society. In the Rietspruit scenario, as will be illustrated, the counter-movement on behalf of mining capital has been facilitated by an inactive State unable to regulate mining capital *vis-à-vis* social cost liability. The situation has been compounded by the *institutionalisation* of social costs through the proclamation of Rietspruit mine village into the Emalahleni Local Municipality (ELM) (SAICE, 2007:14; Coaltech, 2010:19).

The origination of the SLP strategy was articulated along these lines by the representative for mine management: Initially Rietspruit colliery also known as Rietspruit Mine Services (RMS) "intended to sell the whole area comprising the township and the adjacent areas that were used for employee recreation areas" (BECSA interview). The underlying rational was for a developer to take ownership over the mine village, "on condition that that developer will oversee the development and proclamation of the township" as part of ELM (BECSA interview; SLP Contractor interview). The tender for the mine village under this arrangement, according to the BECSA interview had been accepted by the mine owners. The villagers of Rietspruit however, "had some issues," which were irreconcilable, eventually resulting in the cancellation of the sale in 2000 (BECSA interview).

[41]The ownership history is as follows: Rand Coal merged with Trans-Natal Coal Corporation in 1994 forming the Ingwe Coal Corporation held by Gencor. Shell sold its interests in Rietspruit to Tavistock in 1997 which was a JCI subsidiary. JCI in turn sold its interests to Duiker in 1998, which in turn has been taken over by Xstrata. Through the merger of BHP Billiton "born out of the old Gencor" in 2001, Ingwe Coal Corporation became a wholly owned subsidiary (RMS, 2002; Creamer, 13 September, 2002).

Rietspruit colliery's post-mining strategy for the village, or what became known as the SLP, accordingly developed in an *ad hoc* fashion in the period 2000-2002, and not in 1998 as publicly claimed by mine management. This primarily as a result of several failed attempts to privatise Rietspruit mine village and its communal assets, resulting in almost all of the White labourers moving out of the village at the cessation of mining (BECSA interview). The primary concern for mine management from the outset was voiding itself from financial liability for the provision of basic services, including water and electricity to the mine village in light of the mine closure, with the closure manager stressing the importance of budgetary limitations on this process:

> *The biggest challenge is to affect the closure safely and cost-effectively as we no longer generate any income from the mine, and must work according to a fixed budget within which we have to stay.*
>
> (Creamers web, 13th September, 2002).[42]

Recouping the historical "value" represented by the physical infrastructure of the mine village and associated infrastructure however, was an equally important component of mine closure: The sale of the 788 houses to villagers became the central focal point of this strategy, with proceeds of such sales to be channelled into a Section 21 company, to subsidise the sustainable development of the mine village in a post-mining context. It was decided by the joint venture companies which controlled Rietspruit Mining Services (RMS), to establish Lehlaka[43] Property Development Pty Ltd (hereafter Lehlaka Ltd) for the purposes of administering the mine village, and seeing through the proclamation of the mine village into the municipality (BECSA interview).

Agreements concerning the provision of services to Rietspruit mine village by the ELM were concluded in October 2001 (BECSA interview). The proposed SLP was however, contested even within RMS's own ranks, with its Duiker Mining partner proposing the bulldozing of the mine village and rehabilitation of the land as the preferred option. However, the manager of RMS at the time argued "this solution would not be politically acceptable," and instead RMS sought a "high-road" SLP option (SLP Contractor interview).

[42] http://www.miningweekly.com/print-version/grand-old-coalmine-placed-in-hands-of-closure-team-2002-09-13 - retrieved 2nd November 2011.

[43] The name Lehlaka is derived from the historically African village settlement, also known as the lower village due to its geographic position relative to the colliery.

Core to the SLP was the sale of houses to retrenched historically disadvantaged employees, with the proceeds of the sales to be utilised for sustainable village development in a post-mining context. The National Union of Mineworkers (NUM) argued for the houses to be given to the retrenched workers for free, in compensation for the years of service to the colliery, however the colliery responded by saying "there's nothing for free in this world" (ex-NUM interview).

After the first workers from the underground operation were retrenched on the 7th of December 2001, NUM alleges management withheld a portion of the workers' severance packages as a "housing cost." This resulted in a protest march by the workers and a sit-in at the administration block demanding the release of the full retrenchment packages, with the NUM chairperson articulating the outcome:

> *...after they forcefully retrenched people in December 2001, they kept forcefully a portion of their money to buy those houses. As NUM we fight for that battle, we said these people did not volunteer to be retrenched, so you cannot hold these people's money, because if you looked into the packages of other people, at the end of the day when they receive letters from the mine, they have left with zero. So we fight for this battle, until the court said, these people did not volunteer to be retrenched, so give those people their money.*
>
> (ex-NUM interview).

In light of the several failed attempts to privatise the mine village, as well as the stand-off with NUM, the SLP came to represent an alternate option for RMS to facilitate the transfer of liability for the village and its inhabitants. The development of a "high road social labour plan" (SLP) presented an opportunity to involve the State on the basis of creating a "public private partnership," with the interests of the historically disadvantaged ex-employees at heart *vis-à-vis* housing and employment creation (SLP Contractor interview; BECSA interview; DHS interview).

Engagements between the community and the Department of Housing at the time (hereafter Department of Human Settlements) (DHS) proceeded with the prospect of creating first-time home owners of many ex-employees (DHS interview). The intent to privatise the surface holdings such as the recreational clubs, golf course, clinic, and training centre in the mine

village remained at the core of RMS's response even under the SLP, however articulated as in the "interest of the community" (BECSA interview).

Tenders for sale of the community facilities such as the recreation clubs, clinic and community hall were obtained by mine management and presented to ELM. It was suggested to ELM to accept these tenders on grounds "because it was lucrative" (BECSA interview). The proposal was rejected out-of-hand by the ELM on the basis that such facilities belong to the community. This even though the proceeds of the sale including revenues obtained from the houses were to be channelled into a Section 21 company under Lehlaka Ltd's control, with the proceeds to be utilised for the purpose of enterprise development for retrenched villagers (BECSA interview).

Contractors with experience in sustainable village development were contracted by RMS at the beginning of 2002. The terms of reference given by mine management to the SLP contractors was to develop the Lehlaka Ltd strategy further, into a post-mining SLP premised on self-sustainability. This would be achieved through the establishment of the Section 21 company that was to serve as an enterprise development fund (SLP Contractor interview). The SLP contractor and villagers represented under the RCDF[44] expressed serious concern at the idea of the impending proclamation of the mine village into ELM dated for the 1st of April 2002. Retrenched villagers could ill afford to pay for their houses as well as municipal rates and services – in a context where the provision of housing and all services had historically been provided for as part of the conditions of employment. After a futile appeal to the Mpumalanga MEC for Housing for a stay on the proclamation by the RCDF chairperson, Rietspruit was nevertheless proclaimed as part of ELM by June 2002 (SLP Contractor interview).

The inherent problem with the SLP, according to the SLP contractor, was that the process was from the outset driven "entirely by mine management, without community participation" (SLP Contractor interview), affirming the findings from the *Coaltech Report* (2010).[45] It was an undemocratic process which accordingly was motivated chiefly by "the interests of RMS,

[44] The RCDF was designed as a communication platform and steering body, for community leaders to consult with stakeholders in the village, but did not have any operational responsibility in the SLP (WCI, 2002).

[45]COALTECH, 2010,'The Socio Economic Aspects of Mine Closure and Sustainable Development: Literature Overview and Lessons for the Socio-Economic Aspects of Closure, Centre for Sustainability in Mining and Industry, Report 1 of 2, Project 7.8.5.

so that they would not have to continue to pay the upkeep of the water, electricity and sewage in the village" (SLP Contractor interview).

Affirming this viewpoint concerns the financial model of the SLP: Funding for the SLP was "internal," with the success of the plan entirely hinged upon the retrenched villagers' enthusiastic participation in purchasing houses in the mine village, with their severance packages (SLP Contractor interview). Support from RMS would come in the form of administrative support for Lehlaka Ltd, with the Section 21 company remaining in existence, "as long as necessary in order to ensure the monies raised from house sales are used for the creation of sustainable alternative employment"(WCI, 2002).

House pricing in the mine village was decided by Lehlaka Ltd at "nominal values," which "at that time was not even 25 per cent of the actual market value" (BECSA interview). House prices were categorised according to size "making it possible for each occupant to pay for the house out of the severance package they would be receiving when the mine closed" (SLP Contractor interview).

The money obtained for each house purchased with the severance money of ex-employees would then be channelled into the Lehlaka Ltd for purposes of SMME development in the mine village (see flow chart chapter 3). However, even at "nominal" values the SLP faced several insurmountable challenges. One of the issues which resulted in the ensuing housing crisis, according to a RCDF participant, concerned the poor value the houses represented due to the exposure of 25 years of operational blasting on the colliery, stating:

> *Standard Bank came here in 1992 to evaluate, while they were busy here they found that most of the houses have cracks and the companies still keep blasting....cracks were lot, windows were cracking in front of them as well as lights, you see, when they start to blast, they said no, the bank cannot finance these houses, you see...*
>
> (RCDF A interview).

Although certain individuals bought houses, some being aided with a housing subsidy provided by the DHS:

> *...there was specific lot of people who refused to buy and said the mine gave them the houses and they're not going to buy the houses. We're actually still battling with them.*
>
> (BECSA interview).

The DHS through this process became the *de facto* State stakeholder in SLP at Rietspruit during the closure negotiations. *De facto,* by virtue of attempting to mediate the impasse concerning housing as ex-employees were given the option to rent, purchase or vacate the properties on mine closure. According to the DHS there was no inter-department assistance from the Department of Minerals and Energy (DME), neither did the DHS receive any meaningful support from ELM further than meeting its administrative function in the proclamation of the mine village (DHS interview; RCDF A interview).

Lehlaka Ltd and the RCDF engaged with the DHS during the time of mine closure, to assist villagers who could not afford the housing and who were eligible for a housing subsidy from the State. Lehlaka Ltd assisted in the application for subsidies of circa 600 houses, of which 300 were successful (DHS interview; SLP Contractor interview). Several impediments to the process of transferring ownership of the houses to the villagers of Rietspruit manifested, core amongst these was the institutional change in management of RMS during the closure process. The RCDF argued that the arrival of "new people that come up with their own thinking or approach," concerning house prices in relation to the subsidy amount, "resulted in the mine indicating that some of the houses are more than the subsidy" (DHS interview; SLP Contractor interview; RCDF interviewee A).

This posed several problems from the viewpoint of the DHS: Houses paid for with State subsidies ultimately were never transferred to grant recipients on the basis that villagers owed a top-up fee to Lehlaka Ltd, and in lieu of top-up fee payment, became rent paying tenants of the houses (DHS interview).

Most poignantly, there were a considerable amount of villagers who point blankly refused to entertain the idea that they should purchase the houses, as they claim the houses were promised to them as part of employment conditions under previous management at the colliery. This is articulated through this account by RCDF member who had resided in Rietspruit since 1983 stating her case:

> *...we didn't agree with them by selling the houses to the community even though they said they were going to sell them with this 'affordable price' as they call it...our concern was that these people have been here for many years. And when they were taken from that company they said you...leave everything the company is going to give you money, a house, accommodation and everything you need not to worry about the house you have at home.*
>
> (RCDF C interview).

RMS denied knowledge of this "housing scheme," saying that no record of such an agreement existed. The villagers however, contested this issue and argued that they did indeed have a "housing scheme," which came into effect in 1986 under the management of Rietspruit at the time, with the chairperson of the RCDF arguing:

> *They implemented the housing scheme...they implemented that housing scheme as a condition of employment that anyone employed after 1986 was supposed to fall under housing scheme, like it or not!...The money that has been paid to the company, they were deducting from our remunerations. We bought the houses we already bought the houses, now if the government put another money again, we are buying the houses for the second time.*
>
> (RCDF A interview).

Whether the housing scheme was a reality at Rietspruit is up for debate. All that can be said is that the development of Rietspruit colliery proved to be quite an anomaly in South Africa mining at the start of operations; claiming to be the first "equal opportunity" mine in the country, in addition to being the first unionised coal mine in South Africa (RMS, 2002). However, it was the establishment of the mine village in particular that had stood out at the time, with Shell "managing" "to nudge John Vorster into agreeing that Rietspruit should house all employees, [B]lack and [W]hite, in family homes" [sic] (RMS, 2002).

Although Rietspruit colliery seems far removed from society even by today's standards, the international spotlight had been focussed on it ever since a violent suppression of African workers at the colliery in 1985. The violent suppression of the workers strike sparked international condemnation and mounting pressure for Rietspruit's multinational partner,

Shell, to cut all dealings with the apartheid State, this in the period of international sanctions (Walker, 1986; ILO, 1986:10).[46]

As production at Rietspruit colliery came to an end in 2002, the prospect of alternate forms of employment made possible through the SLP presented for many of the 1132 employees, hope in the wake of mine closure and retrenchment. For the 536 employees resisting retrenchment, resistance proved futile, ultimately resulting in them being forcibly retrenched. For the fortunate few who were either utilised in the closure operations or were transferred to neighbouring and sister mines, respite was forthcoming. It was however, the marketing of a sustainable post-mining village, with estimates of 700 jobs being created under the SLP, in addition to owning a house for the first time that for many, served as a palliative in the wake of retrenchment. This was however, not to be the case (Coaltech, 2010:20, 21).

The SLP implementation inched ahead during the course of 2002, though bearing less than desirable outcomes for the retrenched villagers of Rietspruit colliery. This due to the fact that a significant number of villagers refused to pay for the houses they occupied. In addition there were villagers who were unable to pay the housing amount in part or in full, either as recipients of State housing grants or individuals in their private capacity (DHS interview, RCDF interview, SLP Contractor interview).

By mid 2002 cracks in the SLP were beginning to show: The "very first step of the Rietspruit SLP, which was the sale of the houses and the transfer of the money into the Section 21 company, was never achieved," and on which, the success of the SLP depended (see flow chart in Chapter 3) (SLP Contractor interview). By early 2003 the failure of the SLP was a certainty. At the core of the issue was the near forced sale of existing houses to retrenched workers, with no financial assistance provided by RMS for ensuring the post-mining sustainability of the mine village and its inhabitants. Nothing further than the retrenchment packages earned by the employees and a R2500 "skills training grant" was issued on closure (RCDF B interview).

[46]Following a two hour memorial service during shift time called by the NUM shop stewards at the colliery for a worker that had been killed, management responded by suspending four NUM shop stewards. This resulted in mass action by 800 workers at the colliery in a bid to have the four shop stewards reinstated. The striking workers were met with tear gas and rubber bullets and ordered back to work at gun-point, resulting in 120 refusing to return to work, later being dismissed. The incident gained the attention of the International Labour Organisation as well as unionised colliery movement in the USA linking up with the NUM as part of the anti-apartheid boycotting campaign against Shell, complicit in dealings with the apartheid State under sanctions (Walker, 1986; also see ILO, 1986:10).

The recent *Coaltech Report* (2010) places the figure of "sustainable" employment created after mine closure at 77 jobs, 11 per cent of the original target. The *Coaltech Report* (2010) further describes the current socio-economic profile of the mine village as comprising of "huge unemployment" upwards of 65 per cent, six years after closure, with villagers subsisting "in a state of persistent structural poverty," largely mirroring findings from the *Laduma Report* (2007) (Coaltech, 2010:20, 21; Laduma, 2007).

## 5.2. The Economy of Representation and Governance: The Discourse of Conflict

For the villagers of Rietspruit frustration runs deep. According to the RCDF, poor communication from the outset played a significant role in the failure of the SLP. The RCDF contends the message from RMS has been unclear concerning the sale of houses, as well as promises tabled under the SLP, with one RCDF participant recalling a meeting with the mine closure manager during the course of 2002:

> *...every time they say we must buy the houses they said [the mine closure manager] says so. [The mine closure manager] was there in the meeting and said '...people I want to clear my name, I'm not selling houses I'm here to close the mine!'*
>
> (RCDF C interview).

With the failure in establishing the Section 21 company, the initial so called "quick-win" SMME development initiatives started in 2001, such as the spinach tunnels, beadwork, meat processing and light textile manufacturing designed to garner initial "community buy-in," had failed – with a handful of beneficiaries disappearing with capital equipment and proceeds (BECSA interview, SLP Contractor interview; RCDF interview A).

The responsibility for the failed "quick-win" strategies and the SLP in general, according to the mine management representative, resided with the community and the government. With the mine management representative citing individual greed, weak leadership, an unwillingness to cooperate and a lack of government support as the primary reasons for the SLP's failure (BECSA interview). The SLP Contractor alludes to contending forces at play during the mine closure, with RMS possibly seeking to avoid a direct confrontation with NUM. The introduction of a third party "contractor" and the development of Lehlaka Ltd

thus kept the social aspects of mine closure at arm's length for RMS. This allowed the management of social aspects associated with mine closure by proxy rather than directly. This perhaps deflected NUM's attention to the "imposition of an outside company," handling post-mine closure issues such as job creation, believing that this should have been handled by local individuals under NUM's auspices (SLP Contractor interview).

For the RCDF the issue of negative outcomes concerning the failed SLP concerned the lack of *bona fide* and meaningful engagement by RMS with the community. According to the RCDF this was the result of a "clash of interest" between stakeholders, resulting in the abandonment of the mine village by the company:

> *...Some people are talking there in the boardroom talking about our destiny, our future, deciding our fate without our engagement...there was actually a lack of meaningful engagement. I emphasised that to him [mine management], the reason why a lot of things didn't go right was, the community was left out, by those who were on the lead...to the detriment of the community...and when they leave they left everything, they leave without informing the community 'hey guys we are now leaving.' Everybody just say hey? Where is the direction? Am going to East or West? They leave us at large!*
>
> (RCDF B interview).

### 5.2.1. The Representation-Employment Nexus

It is within this context that villagers are living within a state of contested representation concerning mine village governance and limited employment opportunities in light of the failed SLP. In their bid to navigate and adjust to life post-mining in ELM, they find themselves struggling for answers. For the villagers of Rietspruit, defining *liability* and harnessing meaningful representation in a post-mining context is the first step necessary for going forward (RCDF interview; ex-NUM interview).

The crisis in representation according to a retrenched villager at Rietspruit is attributed to the failure of labour unions at neighbouring collieries in representing the retrenched people of Rietspruit, even though many of these union officials reside at Rietspruit. The villager calls for unions to play their part in recognising that the struggle for socio-economic justice extends beyond the shop floor into the mining communities:

> *....the union itself knows the situation of Rietspruit, most of them are at the leadership...I'm sure they don't have the knowledge that to be the union, you must also link that unionism with the community, it's not only the employees, but you must check where the employees are coming from.*
>
> (Villager 1 interview).

The loss of union representation in light of being retrenched at Rietspruit and their continued plight of unemployment, has according to the ex-NUM representative, been a serious challenge. Unemployment in the mine village remains high, even though new mining operations in the region and immediate vicinity have followed in the wake of the closure, such as Rietspruit's sister colliery Klipspruit, situated some 15 km from Rietspruit. The issue of unemployment has further been complicated by a phenomenon of *un-employability* at Rietspruit due to the politicisation of the SLP in its failure, with the ex-NUM representative stating the plight of retrenched villagers:

> *...there was Klipspruit, Ogies, in fact Klipspruit is Rietspruit, we are saying if there are vacancies, people of Rietspruit should be considered, but because of 'our political agenda!' – These people are not considered anymore! And it's a problem that we need to address as time goes on, we are also saying that, the surrounding mines in ward 32, they must act fair, they must employ people so that we now remove this poverty from these people.*
>
> (ex-NUM interview).

### 5.2.2. Governance for Whom?

The lack of democracy with which the SLP came into existence has according to the RCDF, similarly been mimicked by the imposition of local municipal governance structures in Rietspruit village. This in the form of a non community nominated ELM ward councillor taking over the representation of Rietspruit's mine village (RCDF interviewee A and B). It was within this context that the RCDF lost its representational voice, being sidelined in representing the community by a non-village nominated ward councillor, with the RCDF participant arguing:

> *Ward councillors got in there took over, they seems to have more powers than RCDF, of which of those ward councillors are not democratically elected by the community. We just see a lady that is our ward councillor, we didn't know how.*
>
> (RCDF A interview).

The RCDF argue that neither the ELM nor RMS accepts responsibility for governance and maintenance issues at Rietspruit. This was evident after the village had been proclaimed, with ELM failing to regard the villagers of Rietspruit as part of the municipality, at least at a service desk level, with this RCDF member articulating the quandary villagers found themselves in after the "hand-over":

> *...if you wanted to complain about something or to Emalahleni, then Emalahleni would say no you are not officially handed over by the management. Then the management would say go to Emalahleni...so called passing on the buck kind of, you know, then we become confused.*
>
> (RCDF B interview).

As years progressed in light of mounting service delivery issues in the mine village, the situation for retrenched villagers became increasingly frustrated, with the ward councillor failing to represent the villagers at a ward level. The RCDF attempted to escalate the issue and deal directly with ELM but the chairperson of the RCDF states:

> *All doors and gates were closed for the community of Rietspruit. You suppose to go nowhere (!), to lodge a complaint. That you can go to Emalahleni once you reach the reception they will phone the ward councillor, '...there is such and such a person like this and this, do you know them? No get rid of them,' and then you will never enter there.*
>
> (RCDF A interview).

The issue according to the RCDF concerns Rietspruit not being recognised as a municipally governed area by ELM due to the existing private equity stake in the mine village in the form of Lehlaka Ltd. Lehlaka Ltd is still considered the legal owner of many of the communal facilities as well as houses in the mine village. To this end, a municipal official from Kriel stated: "Unfortunately you are not being treated like the people of Kriel...so we cannot

continue with these discussions, because you are not treated like people under a municipality" (RCDF A&B interview). This has negatively impacted upon the mine village upkeep, with the combined Lehlaka school last seeing maintenance in 2002 under RMS's management. The RCDF have made several pleas for help, both to RMS as well as the provincial Department of Basic Education (DBE) for intervention, however no respite is forthcoming. A visit by the DBE in February 2011 confirmed the fate of the villagers by saying "that school does not belong to us [to the State]. It is not our school. Our responsibility there, is to pay the teachers" (RCDF C interview).

The isolation of the village in light of the mine closure was further impacted upon by the closure of its hospital. Villagers had to travel to neighbouring towns such as Emalahleni or Kriel for primary health care. However, recently villagers have succeeded in getting a State nurse re-instated at the Rietspruit hospital, significantly improving access to healthcare (RCDF interviewee A).

However, of greater concern for the RCDF are criminal elements of a destructive nature setting hold in Rietspruit, with specific reference to vandalism of so-called community facilities such as the recreational clubs and in particular, the Lehlaka community hall, with appeals for assistance having fallen on deaf ears:

> *I can recall, personally I went to see some of them at Kriel [municipality] to ask, 'look out facilities are being vandalised we were told that they were under your care, what are you doing?!'...some of the facilities were given to the council but on the other hand, the council did not take care of it, when they were told, they said no, the community facilities are not regarded...when the mine was running, there were unit managers or managers appointed to look after the facilities like supermarket and the other facilities, but ever since the facilities that were given to Emalahleni or council they were broken to the ground. The question is why?*
>
> (RCDF B interview).

The issue concerning liability for community facilities such as Lehlaka Hall are however, complex. As a result of the SLP failing to establish the Section 21 company, the transfer of ownership over such facilities to the "community" of Rietspruit was never realised. Instead the properties remained under legal ownership of Lehlaka Ltd, which remains a BHP Billiton

listed company (NUM interview; RCDF A&B interview). However, according to Lehlaka Ltd, ELM and in particular the local councillor are seen as the custodian(s) of communal facilities on behalf of the people of Rietspruit. Therefore, although the facilities "belong" to the "community" under the township zoning plans, legally these facilities do not belong to the community. In context of the failed SLP, RMS has essentially *de facto* written off liability for these facilities, with the primary focus seeing to it that houses are paid for by occupants (Legal correspondence; BECSA interview).

As a result of the insecure property tenure concerning the community facilities, according to the RCDF, so-called criminal acts of vandalism for purposes of self-gain have been orchestrated by local councillors, with one RCDF participant stating:

> *Since the mine left, we have these councillors, they are the people who are responsible for the place, they are the ones who was supposed to make sure our place was safe...they were supposed to take care of them, but instead they wanted to have their own interest....you know those young guys, those tsotsis! [criminals] When you ask them to do something...they told the people the councillor said so. [S]He said collect the bricks for her and we took them somewhere. That's why we say those people have interest, they are not concerned about our community, because we are here to stay!*
>
> (RCDF C interview).

A second RCDF participant affirmed:

> *Ward councillor self used the young guys, young boys, to vandalise and take material to build her house in the veldt and extend another one in Phola, ward councillor! You see, that type of crime is not easy that you can control it.*
>
> (RCDF A interview).

However, according to the ANC ward chairperson and *incumbent* councillor[47] the current social and economic challenges facing Rietspruit are attributed to the high unemployment in the village, stating:

[47]Interviews were conducted in March/April 2011, with the local municipal elections taking place on the May 2011.

> *...we need to take it into consideration, if a person is not working it becomes dangerous, because now and then when the sun sets, he thinks as to what am I going to eat, what am I going to provide for my family?*
>
> (ANC ward chair interview).

The RCDF however, was thus less than optimistic about the ensuing municipal elections due to the disillusionment experienced as a result of the poor state of affairs in Rietspruit since proclamation, in addition to the lack of democracy concerning councillor candidate nomination. In questioning the RCDF about prospective candidates for the upcoming municipal election, there was unanimous answer of self-nomination, with: "the very same people, it rotates! That's what they did from the beginning! And it still continues!" (RCDF A&B interview).

This frustration was carried through to the national level with the RCDF visibly disappointed by the failure of the State to safeguard the interests of the community as per agreed in the SLP and proclamation process. The uncertainty over governance of Rietspruit has, according to the RCDF, been attributed to the lack of clarity inherent in the SLP, failing from the outset to adequately contend with the resulting vacuum in ownership and governance in the mine village. Starting with RMS voiding itself of liability for the mine village once the proclamation of Rietspruit into ELM had been finalised in mid 2002. For the RCDF the questions remain:

> *...how was the village to remain governed?...Who was supposed to govern the village, during, or after the mine closure? Or, with regards to the social plan, who was supposed to do what? This is the question we are always asking ourselves, saying who was supposed to look after the village? Whether it was supposed to be the inkosi, chief or councillor...*
>
> (RCDF B interview).

The RCDF has recently attempted to escalate the matter to the provincial level, lobbying the premier of Mpumalanga for an investigation into the matter, in light of evictions by Lehlaka Ltd starting in the last quarter of 2008 (Legal correspondence). However, little progress into the issue has been made due to the complexity of the issue. For the ANC ward chairperson escalating the issue directly to the premiers office has been an incorrect approach, instead individuals and forums such as the RCDF must follow protocol because:

> *...We cannot just jump to national government, we have got structures in place. One is with the involvement of our local councillor, we must approach our Emalahleni municipality. If we fail those, we need to approach Nkangala district...that's the protocol that people in future must follow. If you say you've went to the national government, which national government?*
>
> (ANC ward chair interview).

Why the Rietspruit story is *complex* however, concerns the failure of clearly defining liability for issues concerning governance and basic services provision in light of the failed SLP and township proclamation. The failure of the SLP has essentially resulted in the village being in a state of limbo regarding representation and governance, allowing acts of vandalism against communal infrastructure to take hold.

### 5.2.3. Nothing is for *Mahala*[48]

Under the "conditions of establishment," an agreement between RMS through Lehlaka Ltd and the State, committed Lehlaka Ltd to accepting the following conditions necessary for the mine village proclamation:

> ...the applicant [mine owners] accepts responsibility with regards to the payment of rates, basic services, consumer accounts as well as for the maintenance of engineering services, for the next seven years from the date of approval of the town by the MEC of Housing and Land Administration and that guarantees be submitted to the Municipality in this regard.
>
> (Legal correspondence, township proclamation 2005).

The RCDF interpret the clause stating Lehlaka Ltd should be liable for the "consumer accounts" for a period of seven years as a guarantee enshrined by the State under the MPRDA and Mine Charter with reference to the sustainable development of the mine village under the SLP. Lehlaka Ltd however, interpreted the matter differently: On the date of proclamation of the mine village in June 2002, Lehlaka Ltd became the body held liable by the State for the payment of services such as water and electricity for the mine village for a period of seven years. Lehlaka Ltd followed swiftly, fitting electricity prepaid meters into the

[48] *Mahala* translates to "free" in isiZulu.

houses of the mine village, with this account from a RCDF participant articulating the dynamics at play:

> *...in 2002 they installed these prepaid meters into our houses. Then they told us people now, you are going to pay for electricity and water because there is nothing for mahala! So we paid for electricity. But what was amazing was that our electricity was not found everywhere. We still have the receipts. It was found here at this [Rietspruit] supermarket there was just a small place where we were buying our electricity. If you don't have electricity by Friday and were not aware, it means that during the weekend you won't have any electricity. It was called Rietspruit. Not Emalahleni!*
>
> (RCDF C interview).

On this basis villagers could not purchase prepaid electricity from municipal outlets, including using ELM cell phone electricity recharge service, due to Lehlaka Ltd being the legally liable account holder for the municipal services account, including water for the mine village. Water was slightly more complex to handle; here Lehlaka Ltd opted to send all the villagers water accounts totalling equal amounts, no matter the household size (RCDF C interview). Due to the lack of transparency in the provision of basic services, confusion has arisen amongst villagers, alleging that they were being over-charged relative to residents from the neighbouring towns. The confusion has been exacerbated by the lapsing of the said agreement circa 2009 between Lehlaka Ltd and ELM, with ELM calling for villagers to start paying for their services:

> *...So now they [the municipality] say in the meeting, we are going to start paying for electricity and water?! We didn't understand which electricity? Because we already paying that electricity and still paying that water!*
>
> (RCDF C interview).

The lack of transparency in the provisioning of services after the cessation of mining has according to the RCDF been exacerbated by the lack of democratic representation under the local ward council structures. The DHS cites the lack of a co-ordinated approach by ELM with reference to Rietspruit and the stakeholder responsibilities under the proclamation as part of the problem, stating that interaction with the mine is done on an *ad-hoc* basis, with limited meaningful engagement (DHS interview). Furthermore, as a result of no investment

by ELM into the village since the proclamation, has resulted in many villagers refusing to pay for their services, on the grounds of reciprocity: “They didn’t invest in the community ok, but what they are doing is to say, hey! It’s time to pay!” (RCDF B interview).

Yet the RCDF argue that demands by the ELM for basic services payment have been forthcoming, with villagers being characterised as people who expect everything for free or for *mahala*. A perception that according to a RCDF participant is premised on an illusion of a once productive mining village allowing for a subsidised life for villagers:

> *...whereas they don’t have the information about us. We weren’t getting things for mahala! This was a profit making kind of undertaking! It was not for mahala!...we were paying rent, there were some kind of payments in kind, but maybe people have the information saying we had the bus to and from shops, unfortunately they didn’t have the information to say, this was a payment in kind, the money was being deducted from the budget. There was a budget!*
>
> (RCDF B interview).

In addition, the quality of basic service provision such as water quality is a big challenge in the village. This in part due to a significant growth in the population of Rietspruit with the joint partner of RMS building a slew of low cost housing for displaced farm workers as a result of coal mining in the region. ELM has accordingly identified the need to upgrade the existing purification plant (IDP, 2011/2012), however, for the RCDF this offers little respite for the daily challenges they face:

> *And the water that we drink here! Every weekend there is no water! If you put the water into a glass, you will see a lot of mud at the bottom of the glass. So this Emalahleni, I really don’t like it! Ja, it’s because of this that we are like we are today!*
>
> (RCDF D interview).

It is within this context that villagers of Rietspruit have been met yet again with failure, questioning what life has to offer them in a post-mining context, struggling to come to terms with what life in Emalahleni municipality means to them:

> *...we still try to answer your question about how do we feel about Emalahleni? It's a mess! Where we stay here, just across there, are waters that are foggy, houses are in the mud, they've been there for almost 5 years, and they don't do anything. The house is in the mud, it can collapse anytime.*
>
> (RCDF B interview).

The ANC ward chairperson and incumbent councillor however, contends that the "issues" concerning service delivery by ELM have much to do with both unemployed and employed villagers of Rietspruit not paying for their services, expecting "the municipality to offer them a free service" (ANC ward chair interview). In recognising that the issue of non-payment resides in the failed outcomes of the SLP, and the ensuing housing crisis, the ANC ward chairperson still contends that villagers should pay for their services. The ANC ward chairperson argues the current position of payment refusal is untenable and calls for an assessment of the village to determine the indigent from those that are able to pay:

> *...some of the people that do not have title deeds are paying for water and paying for electricity, but the rest of the households, they are not paying. There is a wrong perception. So we must lead by an example to say we must pay for our own services and fight for our own municipality to deliver.*
>
> (ANC ward chair interview).

### 5.2.4. Evictions and New Arrivals

There are several dimensions to the housing crisis at Rietspruit, dealt with here in the order in which they arose in discussions with the RCDF. The first concerns the evictions served by the mine owners on former employees. In the last quarter of 2008 eviction orders and notices were served on "defaulting purchasers" at Rietspruit, which according to the legal team of Lehlaka Ltd has arisen because:

> Some rebellious community members discouraged members of the community from buying the houses they are staying in.
>
> (Legal correspondence, mine lawyers 2009).

According to the RCDF and the DHS, villagers have been resistant to paying rent and mortgages, as maintenance for the homes as stipulated under township proclamation by mine management has not been forthcoming:

> *...people also argue to say that for years the mine has not been fixing their houses when there have been snags, and 'we had to use our money and fix the houses' it has been the argument of the people.*
>
> (DHS interview).

The second dimension to the housing crisis concerns the withholding of title deeds by Lehlaka Ltd and the payment of occupational rent *in lieu* of full payment for the houses (RCDF interview; Legal correspondence). For the DHS this was problematic as the Rietspruit "matter" was being attended to by the DHS, and if evictions were occurring then it becomes the DHS's responsibility to care for the homeless:

> *I don't think that we are working in good faith in particular from the mine side, if they are doing the eviction when there are engagements with them in terms of addressing the problem of Rietspruit you see. When they continue with eviction the ideal situation is that they suspend the eviction because already there are interactions between the department [and mine management].*
>
> (DHS interview).

The "interactions" in question consist of the alleged request by the DHS for RMS to write off the arrears owed by the "unlawful occupants," as no State subsidy can be used for rental arrears, but rather "to ensure that the property is transferred into the name of the person" (DHS interview). The DHS call for the RMS to meet the State "halfway" on the issue. However, for villagers that do not qualify for the State subsidy, the challenge of housing insecurity remains, as State subsidies are for "first time home owners" only (DHS interview).

To compound matters, Rietspruit has in recent years seen a significant influx of "outsiders" who had not previously worked at the colliery. These "outsiders" comprise of three generalised groups, labourers from neighbouring mines, a second group comprising of vagabonds, and a third group comprising of displaced farm workers. The councillor and

officials in ELM have according to the RCDF, become the *de fac*to landlord(s) of these tenants. The situation is illustrated by a RCDF participant stating:

> *...quite strangely, we've got another population that is residing here in the village, who were never part of the agreement what we are discussing here, who have been benefitting from 2002 to date! The question was, who was paying the bill, ok, when we were paying for the water and electricity? We've got plus minus 26 blocks that they let to the next to the recreational facilities... nobody is saying anything about them, is that villagers? Or the people who have laboured and who have made a couple of mills [million] for this multinational company, instead they are being, you know, what can I say, they are being, let's say tortured! There are people just across here, ok, we don't know where they come from...*
>
> (RCDF B interview).

The RCDF argue that the lack of governance concerning the village in the post-mining phase has allowed the influx of outsiders, and in so doing, has changed the character of the village with a specific reference to the threat on the safety of residents and their property.

The housing crisis at Rietspruit has recently been escalated with the development of a number of low cost houses, built within the confines of Rietspruit village, for displaced farm workers. The low cost housing has been provisioned for displaced communities by RMS's joint partner Xstrata Coal SA's Southstock and Goedgevonden collieries. This accordingly forms part of its "sustainable mining approach" to safeguard the health and safety of communities at risk of mining, arguing:

> Xstrata Coal SA established what distance community members were prepared to travel to access community services and, based on the feedback from this interaction, three possible relocation sites were presented for consideration. Both communities chose Rietspruit where a *well-established* mine village already existed.[49]
>
> (Xstrata Coal SA, 2009) *(emphasis added).*

[49]The 2009 Xstrata Sustainable Development Report claims one hundred and twenty units were built to accommodate the 110 families that had been identified for relocation; 91 from Southstock and 19 from Goedgevonden.

The development of the low cost housing for the displaced communities by Xstrata within Rietspruit village, has in turn brought feelings of frustration and indignation for the original villagers. Some of whom had laboured in excess of 20 years of service at Rietspruit colliery, and were now faced with the prospect of eviction in the context of the failed SLP. According to the RCDF there has been no consultation with the "original" ex-employees and villagers of Rietspruit concerning Xstrata's "resettlement" programme. The land on which the houses were built for the relocation program should according to the RCDF have been under the control of the municipality – as the rights over the land succeeded to ELM through the proclamation of the mine village in 2002.

It is within such a context that the so-called notions of the *rational* and *irrational* in the housing crisis need to be interrogated, specifically within the context of evictions, with a RCDF participant stating his case:

> *...and again the social plan doesn't allow what is done by Xstrata...Xstrata is part and parcel here, they have got 50 per cent shares....They are suppose to call the community and discuss the problem...Now people are being accommodated...from the farms, where the Xstrata is busy mining, instead to take them to Pohla and Witbank, instead they brought them here!*
>
> (RCDF A interview).

## 5.3. The Economy of Redress: The Discourse of Liability

### 5.3.1. Rietspruit and the SLP in Context: Accumulation by Cost Externalisation

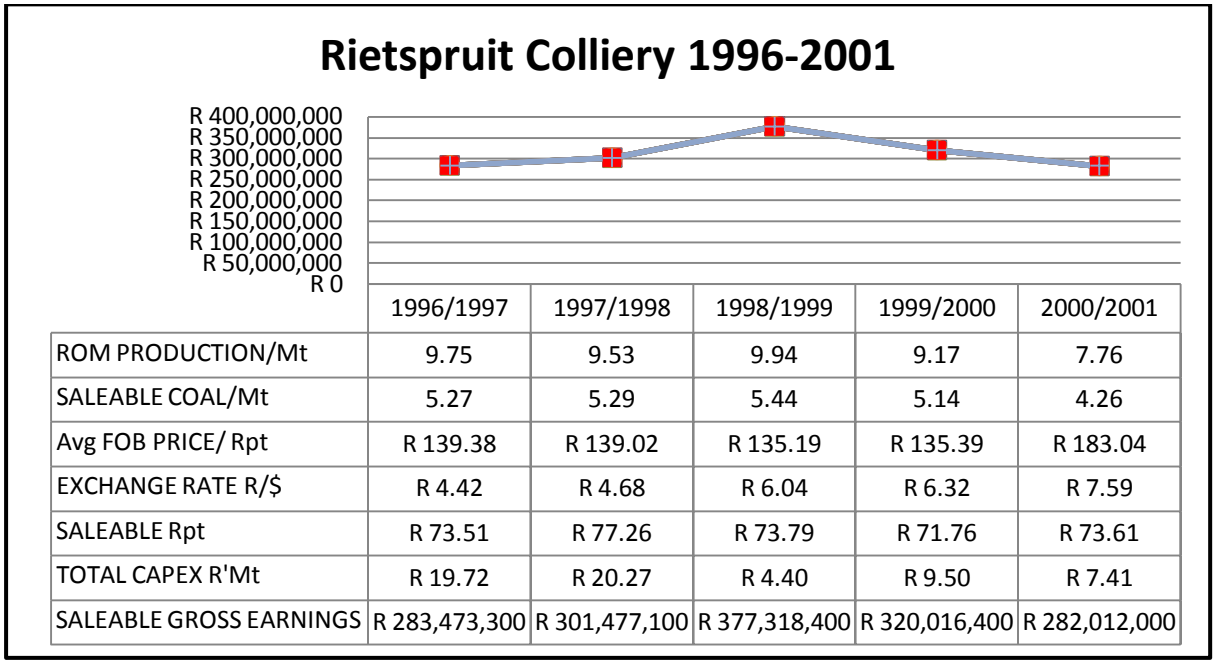
The SLP contractor from the outset foresaw the ensuing predicament concerning the proclamation of the village into ELM, and made the argument for the mine village to become a private village. The argument was made for purposes of avoiding "the imposition of rates and taxes...which would be inappropriately high for a post-mining village with less than 100 per cent employment" (SLP Contractor interview). In addition, ownership and governance issues in such a context perhaps would have been clearly defined avoiding to a large degree the quandary the mine village currently finds itself in.

According to the mine management however, the will-full destruction and vandalism of communal facilities upon township proclamation, was as a result of an inability of the "community" to enjoy communal facilities, without strong leadership. Instead greed, weak

leadership, an unwillingness to cooperate and a lack of government support resulted in not only widespread vandalism of community facilities, but was also seen as responsible for the failure of the SLP (BECSA interview).

Accordingly, the mine management representative feels that when it comes to the successful implementation of a SLP as in Rietspruit, "government has a bigger role to play." The mine management representative stated that many promises were made to the villagers' *vis-à-vis* housing subsidies, but little was forthcoming on the part of government (BECSA interview).

Furthermore, when questioned about the role of ownership and whether retaining a greater share in the mine village upon mine closure would result in the successful outcomes of a SLP such as at Rietspruit, the mine management representative felt although it is "probably the best thing to do," it is however, beyond a mining company's "scope" and "feasibility" (BECSA interview). The following graph is intended to contextualise gross earnings at Rietspruit colliery over its last 5 years of operation, (1996-2001). The figures are derived from firm records calculated as saleable coal, less total CAPEX, multiplied by yearly saleable output, averaging R249 million per year in saleable gross earnings.




| | 1996/1997 | 1997/1998 | 1998/1999 | 1999/2000 | 2000/2001 |
|---|---|---|---|---|---|
| ROM PRODUCTION/Mt | 9.75 | 9.53 | 9.94 | 9.17 | 7.76 |
| SALEABLE COAL/Mt | 5.27 | 5.29 | 5.44 | 5.14 | 4.26 |
| Avg FOB PRICE/ Rpt | R 139.38 | R 139.02 | R 135.19 | R 135.39 | R 183.04 |
| EXCHANGE RATE R/$ | R 4.42 | R 4.68 | R 6.04 | R 6.32 | R 7.59 |
| SALEABLE Rpt | R 73.51 | R 77.26 | R 73.79 | R 71.76 | R 73.61 |
| TOTAL CAPEX R'Mt | R 19.72 | R 20.27 | R 4.40 | R 9.50 | R 7.41 |
| SALEABLE GROSS EARNINGS | R 283,473,300 | R 301,477,100 | R 377,318,400 | R 320,016,400 | R 282,012,000 |

Graph 4: Production at Rietspruit Colliery: 1996-2001 (Source: RMS, 2002, own calculations).

Rehabilitation plans for the colliery according to the mine management representative are on track; with a significantly vast area of 1760ha requiring rehabilitation, costing a projected total of "some R302 million, which has to be spent over a period of five years" (SAICE,

2007: 14). Concerning the mine offices, administration block and workshops are being "*subdivided"* for purposes of being sold to a developer to become an industrial park (BECSA interview). The vast tracts of rehabilitated land will also eventually be sold for pasturage purposes only, as the near permanent destruction of the soil's carrying capacity prevents it from ever becoming agricultural intensive land again (FSE interview; EWT interview):

> *Once the land has been stabilised to the state that it can be used as grazing without the fear of erosion and that sort of thing, but that will still be years to come, I don't foresee that within the next 7 to 10 years.*
>
> (BECSA interview).

For the SLP contractor the amount of time it had been allocated, given an "18 month head start," as well as the financial structuring of the SLP from the outset hamstrung the successful implementation of the SLP (SLP Contractor interview). The SLP contractor argues a time-window of at least 5 years would have been necessary, in addition to the mine taking "full responsibility" in seeing through the successful implementation of the SLP. The argument that such a route is unfeasible for a mining company such as Rietspruit colliery is invalidated on the basis that:

> *It is the mining company that has had the sole benefit of the non renewable mineral that it has removed from the ground and it must now rehabilitate whatever damage it has caused. In that sense the plan that the RMS management had cooked up to make the money available for the SLP to be generated by the retrenched people buying their houses was actually iniquitous.*
>
> (SLP Contractor interview).

Feasibility, according to the SLP contractor is guaranteed for a mining company such as Rietspruit on the grounds that the mining industry is privy to tax relief in writing off "the costs of establishment." This in essence equates to the mine village being "already paid for" (SLP Contractor interview). In addition to the above concerning feasibility, according to the MPRDA (2002) Section 41:

> An applicant for a prospecting right, mining right or mining permit must, before the Minister approves the environmental management plan or

> environmental management programme in terms of section 39(4) issues the environmental authorisation, make the prescribed financial provision for the rehabilitation [or] and management of negative environmental impacts.
>
> (MPRDA 2002).

On this basis every mine is required by law to open a trust fund which is exempt from the mine's operational risk for purposes of rehabilitation (SLP Contractor interview).

Furthermore, continuous technological innovation and advancement with reference to mine closure and rehabilitation allows for increasingly cost effective ways to rehabilitate the disturbed area. This was applicable to Rietspruit colliery, evident in it winning the 2006 SAICE award for "Technical Excellence 2006," for "Multifaceted mine closure and rehabilitation." This as a result of Rietspruit colliery being the first colliery in the world to utilise draglines in rehabilitation phase for reasons as it proved to be the "most cost effective way" (SAICE, 2007:14). Thus according to the SLP Contractor:

> *....by the time the actual rehabilitation had to be started at Rietspruit, more innovative and cheaper ways had been found to close up the holes again with the overburden that had been originally removed. So in fact, as far as we could gather, there would have been a surplus left over in that Trust Fund. Yet the accountants looked upon that as a shut-down windfall for the company, instead of agreeing to apply the surplus funds to make the SLP a success.*
>
> (SLP Contractor interview).

### 5.3.2. Whither the Counter-movement?

For the RCDF, the onus or liability remains on RMS to renovate the mine village and to provide assistance for the retrenched employees, arguing RMS as complicit in the vandalism and crisis of the mine village:

> *...there was supposed to be a Section 21 company which was supposed to run this village then there was going to be some kind of economic activities for the villagers to labour, so as to be able for them to pay the rates and taxes, not cough up from their pockets....Why did this all disappear? This is some of our wish, ok, to say we want to see this be reviewed for the interests of our children.*

(RCDF B interview).

For the ex-NUM representative, hiring outside contractors for the development and implementation of the SLP to a degree negated responsibility of RMS to create employment opportunities in the wake of the colliery closure. Furthermore, the failure of NUM to champion the interest of the retrenched employees of Rietspruit has resulted in a crisis of representation, stating:

> *...in fact the NUM and those unions in Klipspruit are not considering Rietspruit people as people that they are suppose to be considering for. So we need to approach those people and BECSA...you cannot just dump people as they have dumped us!*
>
> (NUM interview).

The issue of unemployment remains the greatest challenge facing Rietspruit for the ANC ward chairperson. On this basis there is a need for an urgent meeting with various regional mining houses, starting with BECSA, specifically at Kilpspruit colliery:

> *...we wanted to address a letter to Xstrata because they're relaxing...we need to consider the people of Rietspruit if there is any job creation, people surrounding this ward should be considered...first!*
>
> (ANC ward chairperson).

For the DHS the matter of addressing the crisis at Rietspruit is complex, with the DHS bound to a mandate of catering for impoverished, first-time home owners. On this basis, DHS is attempting to resolve the issue of State subsidy recipients at Rietspruit, who have failed to receive their title deeds due to top-up fees or rent owing to Lehlaka Ltd. The lack of inter-departmental involvement from the DME with reference to the SLP, as well as by the ELM, has been a challenge for the DHS (DHS interview).

Furthermore, the failure of the MPRDA 2002 to enforce social cost liability on the part of RMS *vis-à-vis* housing provision in a post-mining setting renders the State with few alternatives other than "requesting" co-operation from RMS on finding an amicable outcome (DHS interview). The DHS is proposing that RMS write off rent arrears and tabulate a figure owed by the grant recipients so that a conclusion for the "lucky few" grant recipients can be

reached. According to DHS, the question of housing at Rietspruit could have been settled differently, offering this insight:

> *The best situation is they give the person the money what is due to him and also the accommodation, then also it shows their commitment and responsibility, and interest towards...ensuring that they are also committed to assist government that people are having at least houses.*
>
> (DHS interview).

The legislative shortfall inherent in the MPRDA 2002, in addition to the State's incapacity to adequately address social costs in a post mining setting as evidenced at Rietspruit, is no anomaly. An interview conducted with a National Prosecuting Authority (NPA) official currently engaged in litigation with coal mining companies and respective directors in the Mpumalanga region affirmed the crisis concerning State enforcement capacity. The NPA official argued that the State operates on a reactionary basis, with the mining companies left to operate on a "self-regulating" basis. On this basis legislative enforcement relies on ordinary citizens and advocacy groups to lodge a criminal case against a transgressing mining company before remedial action is taken by the State (NPA interview).

Although mandates within State departments concerning regulating the mining sector are in existence, capacity issues are the biggest challenge. In addition, many of these mandates are biased towards ensuring the ecological rehabilitation of the mine upon closure. It is within this context that civil society organisations such as the Federation for Sustainable Environment (FSE) and the Endangered Wildlife Trust (EWT) are registering as "interested and affected parties" (NPA interview). Dr. Koos Pretorius, director of the FSE in an interview, states: "Look, the laws are there but it's not regulated, good laws which are not implemented, and are not used to regulate industry" (FSE interview).

Accordingly, the issue of capacity deficit, particularly within the DME has been exacerbated by the recent commodity boom, specifically in the coal mining sector in Mpumalanga. Dr. Pretorius elaborates, as at 2009 the DME had 69 officials to handle "more than 505 mining right applications in Mpumalanga alone, [as well as] 6000 prospecting right applications" received since 2004 (FSE interview). This was affirmed by Ms. Ursula Franke from the EWT, arguing the level of disorder in the DME is such that prospecting coal mining companies in Mpumalanga are contacting her first to see whether EWT will object to the

mining application and register as an "interested and affected party." This for reasons that the DME in Emalahleni do not "even have a GIS system," and as such, "are issuing prospecting applications in nature reserves" (EWT interview).

For Ms. Franke, the coal mining industry need to be honest and recognise that coal mining has a social aspect to it. This is evidenced by the requirement for an Environmental Management Plan (EMP), which:

> *...in essence already indicates that they are taking away from the community to start off with. Because if you don't take away, you won't have to give back, and I think that's the first thing that they have to be honest about. If we start there we can start addressing the issues.*
>
> (EWT interview).

It is within such a context that organisations such as the EWT and the FSE have recognised that multiple voices coming together allow one to be heard. For the EWT and the FSE recognising the social and ecological spheres as intrinsically interdependent forms an integral part to this strategy. It is here that struggles for social activism are linked with struggles of ecological preservation *vis-à-vis* the impact of coal mining:

> *We've just come to realise that a single NGO is not enough, not strong enough, so we have to get together with as many partners as possible to try and make our voice heard. I think the thing that I've come to realise is that nothing is in isolation, yes we try to fight for the integrity of the environment, and biodiversity but that is intricately linked with the communities. There are so many people in rural areas in this province that are dependent on different streams they don't have power over, so they come from their perspective and I come from my perspective, but we actually meet each other halfway.*
>
> (EWT interview).

For Dr. Pretorius, the situation at Rietspruit is not uncommon in South Africa, citing numerous similar cases of communities displaced and dispossessed as a result of coal mining, with communities "relocated" to areas where:

> *....there is not a single economic parameter underneath...that will sustain that community once the mine closes in 10 years time, poverty will set in and everything that goes along with it.*
>
> (FSE interview).

For Dr. Pretorius, the market logic is at the core of the issue, arguing that mines consider communities as not being interconnected to their respective socio-ecological environments, but rather as problematic impediments to the mining process. This accordingly requires the most efficient and cost effective "strategies" to deal with these so-called "impediments," in a bid to guarantee access to the land (FSE interview). In describing a similar scenario to the Xstrata "relocation" programme at Rietspruit, Dr. Pretorius detailed the situation of a community some 40km away from Rietspruit, currently in the throes of being "relocated" for purposes of gaining access to the land:

> *...let's take the old goggo [grandmother] there Maria, she had 27 people if I remember correctly living on her site, alright, so they say 'don't worry we'll build you five houses.' So I said to them 'you're now going to build her 5 houses at Rockdale, 5 RDP houses, who's going to pay the rates and taxes on 5 houses because she is the breadwinner with her pension?' They said they'd pay it for the first year. And the second year? No that's not their problem anymore. We said 'no thank you!' Then we said 'what about the cattle?' Well they said 'there's no place for them at Rockdale, you'll have to sell them.' I said 'you can't let them sell their cattle, the cattle is their bank!'*
>
> (FSE interview).

It is here that one reflects upon the historical character of Rietspruit as a colliery designed specifically for the exporting of coal to European energy markets, however, with the costs of production residing in South Africa – and with the African population in particular bearing the brunt of this. Dr. Pretorius cites examples of collieries in Germany importing South African coal, which in return is sold at profit in Germany to address the rehabilitation of its dormant coal mines, essentially amounting to South African coal "subsidising Germany's treatment of water" (FSE interview). This again is no anomaly, but rather representative of the Witbank coalfield in particular, playing out its historically destined role in world coal market, with Ms. Franke offering this insight:

*I think there is one other thing that is critical to address...we are mining ...coal on the high veldt, a lot of it, most of it is being exported, the problems and issues, it's our people, South Africans, mostly rural people carrying the brunt of what's happening, but all of the financial gain is for a couple of individuals, and most of the gain from extracting the coal is for other countries?! So we are creating all these issues for ourselves and what are we actually getting in return for it?*

(EWT interview).

## 5.4. Conclusion

The chapter illustrated Rietspruit village as a commodity existing within a rational legal economy, espousing the discourse of value. The chapter has illustrated that after several failed attempts to privatise the mine village, the SLP although touted as a high-road social labour plan, essentially amounted to a top-down development strategy of capital substitutability. The SLP during its development was underpinned by a lack of democracy and meaningful community stakeholder engagement; findings which largely mirror the *Coaltech Report* (2010) and the *Laduma Report* (2007) (see Chapter(s) 2.3.1; 3.7; 5.1.1).

It was within this context that so-called rational and irrational are situated concerning liability for post-mining social costs. The chapter illustrated how *inequality* had effectively been *institutionalised* on the proclamation of the mine village into the ELM. The question of social liability as per the MPRDA (2002) in addition to the economic feasibility of the SLP was framed against the backdrop of Rietspruit's funding allocated for ecological rehabilitation, revealing a significant *legal* contradiction.

The chapter concluded by eliciting broader trends concerning coal mining in the region, and illustrated the lack of State institutional capacity as an over-arching theme. The result has been a failure to enforce liability for social costs incurred in the event of mine closure and resource exhaustion. It is here that the study revealed yet again the hollowness of concepts such as sustainable development, especially within the coal mining sector. However, that being said, the findings revealed an opportunity for civil society along with the environmental NGO sector to link strategies and discourses, in a bid to perform a counter-movement *vis-à-vis* enforcing cost liability in the coal mining sector. A counter-movement led not in the interests of (coal) mining capital, but rather, one for broader society and the environment.

# CHAPTER SIX: CONCLUSION

> *On the one hand, mining stands as a triumph of human ingenuity and fortitude over the fickle reluctance of nature...Minerals are liberated from the earth, turning hostile and unproductive terrain into a fount of civilized wealth, freeing society from the drudgery of nature. On the other hand, the act of wresting minerals from the earth has historically required the subjugation and demeaning of both nature and humankind, as faceless pairs of hands and unseen labouring backs descend into the dark, inhuman hell of tunnels to strip away the organs of nature.*
>
> *(Mumford, 1934:70 in Bridge, 2004:241).*

## 6. Chapter Outline

The chapter will by way of conclusion assess the findings of Rietspruit against the preceding theoretical and empirical findings, thus becoming the *interface* stage of the research process. The chapter will begin by review of the core findings of each chapter, underscoring the theoretical and empirical progression of the study.

## 6.1. Overview

The introductory chapter argued for the relevance of a *socio-ecological* approach in analysing the strategic role of *coal* as a finite resource shaping South Africa's historical and continued development outcomes. It was argued the manner in which natural factors such as coal have historically been inscribed, alongside social factors such as labour and technology in the production process, to a large degree determines the character of productive relations and outcomes in a particular society. In addition and more fundamentally, it was argued, this *interaction* between capital, society and nature determines the extent to which the State is able to perform its role of *counter-movement* against the exploitation of society and nature.

The second chapter of the study illustrated the relevance of *coal* within a South African context, and for the region of Emalahleni in particular. It was here that the study drew attention to the speculative character of coal *vis-à-vis* reserve stock measurement, which served several fundamental purposes for the study: The first concerned demonstrating the speculative character of coal as a "fictitious commodity," with certainty of so-called proven reserves drawn into question. Secondly, it revealed *viability* of coal mining in general, as underpinned by speculative assumptions and hypothetical demand scenarios, void of social,

political and ecological context. This had a particular resonance for the area of study in question; focusing on the social outcomes of coal mining for the community of Rietspruit, which had since 2002 ceased production, for reasons "primarily" due to resource exhaustion. In addition it situated the discussion on *sustainable development* within an extractive minerals-energy context.

The argument was made that mainstream notions of *development* and *sustainability* are fundamentally flawed due to the depoliticised, hollow character of such terminology. The DME's *Sustainable Development through Mining* (SDM) (2009) strategy in addition to relevant legislation was herein reviewed, and the argument was made that the SDM strategy is underpinned by false *assumptions* of capital substitutability. The greatest fallacy in this regard, concerns the exploitation of natural capital as the *means* to achieving sustainable development. Here the study called for a *socio-ecology of development*, recognising nature as the support and active agent of production. In doing so, it underscored the inherent contradiction arising in the continued drive for "development" through the continued commodification of nature, such as coal mining, with the loss of biodiversity as irreplaceable.

The third chapter provided a brief historiography of South Africa's modernisation underpinned by coal, and in particular the importance of the Witbank coalfield to this process. This was achieved through focussing on relevant historical phases or historical episodes of development; starting with situating coal within the discoveries of diamonds and gold in the late nineteenth century, the development of a labour force divided along lines of race, and progressing into the State's expansion of electrification and railways into the early twentieth century.

It was however, specifically the post-World War II period and the apartheid State's drive for energy autarky, which consolidated the role of coal as an indissoluble element or *cog* in South Africa's development. Here it was further illustrated how the State had been the vanguard not of society, but rather for the development of a Minerals and Energy Complex, made possible through State and international monopoly capital augmentation of this sector. This was particularly demonstrated during the period of global energy crisis of the 1970s, how coal once again from the Witbank coalfield, facilitated the mechanisation and modernisation of the South African economy. Rietspruit colliery and village were the outcome of this phase of development – a product of one of the many joint, multi-national energy partnerships within the coal mining sector at the time. It was here that the study

demonstrated the rational for mine village construction and development as a form of social control tasked with natural capital valorisation.

This set the stage for review of the post-mining social outcomes at Rietspruit colliery. Through the lens of its post-mining social labour plan (SLP), one was able to witness the development of a post-mining sustainable development strategy, premised on capital substitutability of a perverse kind. Existing mining capital stock in the form of mine village houses were to be sold to African retrenched workers at so-called "nominal values," of whom many had never before owned a home. At the core of the SLP was the inherent market *logic* of Rietspruit colliery; viewing all facets of the colliery including the mine village as a commodity, representing *value.*

It was within this seemingly *rational legal economy* that the SLP developed: The first step concerned registering a subsidiary Lehlaka Ltd to dis-articulate social costs concerning village and social liability from ecological aspects of mine closure. The second step concerned the hiring of a SLP contractor to handle the social aspects of mine closure at arm's length for the mine, or by proxy. The third step comprised of State involvement, with assistance from Department of Human Settlements (DHS) for the purchasing of houses through State grants on behalf of retrenched workers. It was through the State's interaction on behalf of the villagers concerning housing grants, in addition to facilitating the village proclamation into local municipal governance structures, which essentially legitimated the flawed SLP. More fundamentally, however, this uncoordinated State interaction resulted in institutionalising *social costs* associated with mine closure.

The failure of the SLP deepened the crisis concerning housing into crisis concerning *representation* and *governance* in a post-mining context. Here it was interesting to note the development of a *discourse of conflict* surrounding the notions of political structures developing not only on resource windfalls, but also on *resource shortfalls.*

In particular, the failure of union representation for villagers once retrenched, left a vacuum within the village, as former representational structures for villagers were no longer accessible. In light of mounting service delivery issues, as well as the destruction and degradation of communal facilities, villagers became rent defaulting occupants, and were declared unlawful occupants. Those seeking answers as to why the SLP failed were declared irrational expecting everything for *mahala,* both by mine management and local government.

By alluding to the mines current rehabilitation efforts and its R302 million rehabilitation fund placed the SLP in context, and brought with it a counter-posing social *liability discourse*. For the mine representative the responsibility for the failure of the SLP resides with the State, as "governments have a bigger role to play," whilst at the same time outlining the circa R302 million environmental rehabilitation efforts by the mine. This will see the mine retaining control over the mined land for at least the next 7-10 years, and in total, effectively being responsible for the mined area for at least 20 years after initial mine closure.

It was here that the legislative shortcomings presented, illuminating the social costs of the un-coordinated interaction between the State and mining capital in the wake of mine closure at Rietspruit. As noted the DHS grants essentially legitimised the "iniquitous" SLP, using State grants to facilitate the creation of a rent paying under-class of retrenched mine villagers. This ineffectual capacity of the State for enforcement was affirmed by the National Prosecuting Authority in addition to environmental stakeholders consulted, arguing the mining industry as a "self regulating industry," with laws in existence, however *not* implemented.

At the core of the issue, is the separating, or rather *dis-embedding* of social costs related to mining, including mine closure, from the necessary historical socio-political and socio-ecological development. Such an approach views the closure process in a de-politicised, technocratic manner of rationalising closure as cost-effectively as possible, with limited liability or concern for meaningful post-mining development outcomes, as witnessed at Rietspruit.

## 6.2. Conclusion and Recommendations

From the evidence presented, the study has tentatively illustrated the social outcomes for the community of Rietspruit within the context of commodification of a finite natural resource in the pursuit of development. In addition, the utility of a socio-ecological approach to historical materialist analysis was underscored. The relevance for adopting such an approach was to draw attention to the inter-relational character of nature as the support and active agent of production and the impending social costs arsing from such an interaction.

This underlying market logic was illustrated throughout the study, with a specific focus on the role played by coal mining, and the manner in which it has historically been inscribed into the economy of South Africa. The outcomes of such an *interaction*, as has been

demonstrated, ultimately bear costs, which at some stage in the life-cycle of the mine, and phase of development, have to be accounted for.

This study postulates that due to the historic importance of coal as a domestic and export commodity in the South African economy has in part resulted in the State being unable to fundamentally, and meaningfully, address the contradictions within the productive relations of society. This is most evident in the lack of State capacity as witnessed at Rietspruit, with historically disadvantaged Africans in society bearing the greatest cost. On this basis the study calls for caution with reference to State policy discourse seeing the coal mining sector, amongst other mining sectors, as a means for achieving sustainable development as contained in the SDM (2009) initiative as well as in the NGP (2010).

It is within such a scenario that the State needs to fundamentally acknowledge and address social costs arising from mining and mine closure. The first step towards achieving this is enforcing liability for social costs upon mine closure; by prioritising post-mining social liability alongside ecological rehabilitation liability. To this end, ensuring meaningful stakeholder engagement through the democratisation of access to information and representation in the event of mine closure are seen as fundamental to mitigate possible social costs. This can only be achieved by active and meaningful engagement with interested and affected parties in the mining sector, with the relevant State department to take the lead in this regard.

In light of the current State capacity deficit however, civil society along with the environmental NGO sector have a fundamental role to play. The first step in this regard is the inculcating of social battles for justice with ecological battles for justice *vis-à-vis* the costs associated with coal mining. For the community of Rietspruit however, the situation remains dire due to the complexity of the matter, necessitating further specialised legal enquiry.

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# Appendices

## Appendix 1

Figure: Dragline in operation (Source: Snyman, 1998:161).

# Appendix 2

## Questionnaire sample

Below is a select sample of questions that were asked during the interviews.

**BHP Billiton Energy Coal South Africa (BECSA) representative:**

1. When did you start formulating a strategy for mine closure?
2. Tell me when did BHP first realise the coal was running out?
3. What are your reasons why in your opinion [for the SLP failure]?
4. Do you think there is a way possible for a social plan to succeed?
5. ...on the question of ownership...don't you think the mine should retain greater control in a social plan?
6. Briefly explain the rationale behind the formalisation into Emalahleni from BHP's side?
7. In your concluding thoughts on the outcomes of this [failed SLP], what do you see for the future of the community of Rietspruit?
8. ...on the ecological front is your rehabilitation is on track? It was a massive area? I heard it was one of the largest in the southern hemisphere?

**Riestpruit Community Development Forum (RCDF):**

1. When the closure was first communicated to you?
2. When did you first hear of the SLP?
3. ... how substantial were these retrenchment packages?
4. How much did they want to charge you for your house?
5. So the title deed to your property means nothing?
6. Tell me a bit about the RCDF and its role in the process, what have relations been like with mine management?
7. For how long [has there been no maintenance of the village]?
8. And the level of healthcare in the community now? Apparently there was a very good hospital when the mine was running?
9. Are you saying these people within the community, or people that have moved into the community and have taken over parts of the community for their own interests? Are these people from Rietspruit originally?
10. Can you try and explain the vandalism of the facilities; the council is not taking responsibility? What do you mean by this?
11. And if you look at mines like Douglas and Wolvekrans where they flattened the communities, why in your opinion did they want to keep Rietspruit and hand this over as a social plan for the people?
12. Why do people have the attitude, and even government has the attitude that Rietspruit is a big problem?
13. How do you find a way forward? How is this problem going to be resolved in Rietspruit?

14. How do you feel about being part of Emalahleni?

**National Union of Mine workers (NUM):**

1. How would you describe the relationship between mine management and NUM?
2. And when was the closure first communicated to NUM?
3. Just explain a bit about the deal BHP was offering when the mine was about to close in May 2002. Were a lot of workers transferred out? What was on the table?
4. How many people overall got transferred, found work afterwards, after the mine closed?
5. On the question of housing quality, people have said the houses are cracked because of all the blasting, and were unable to raise financing because the banks don't want to finance it. What were the people supposed to do?
6. What did the social plan actually set out to do? What was communicated to NUM as sustainable?
7. What role did the department of minerals and energy have in this [mine closure]?
8. What was the biggest challenge for the successful implementation of the social plan?
9. How high is unemployment in this community [facing the community]?
10. And from a service delivery perspective, what are the biggest challenges?
11. Your hopes going forward, you obviously want to see people being employed, but what has your experience been like negotiating on behalf of NUM and the workers, and having worked for BHP Billiton?
12. How would you describe the relationship with Emalahleni municipality?
13. Do you think the formalisation of Rietspruit should have happened?

**Department of Human Settlements (DHS):**

1. When did BHP call for your involvement? And was the Department of Minerals and Energy involved in this?
2. [People in the community are stating that they] are not getting their title deeds, is this an issue?
3. So even if the department paid the housing grant, they [mine owners] are saying there is rent owed on these properties.
4. On the whole question of eviction, what line is the department taking because...the sheriff from Kriel is coming there and evicting people without any prior notification are you aware of this?
5. Apparently the people we supposed to get water and electricity for free for 6 years and immediately certain houses had electric meters fitted? Can you explain this?
6. How is the department going to reconcile this issue as well as the rental issue?
7. Is the minister aware of this issue, of the Rietspruit issue? And have you come across similar cases to Rietspruit?
8. Just briefly outline what you think should have been done at Rietspruit?
9. How do you characterise the relationship between mine management and the municipality?
10. What is the way forward, how do you see BHP'S involvement in the matter, and how is this going to be communicated to the community?

11. Does the Department of Human Settlements have any role in mine closure? Do they need your approval to get the social side of the mine closure approved?

**National Prosecuting Authority (NPA):**

1. Explain the process of holding a mine criminally liable for negative impacts associated with its operations?
2. Is there a dedicated team in the NPA dealing with this issue?
3. Is the mining industry as a whole compliant with legal requirements? On the ecological and social aspects of mining?
4. What are your greatest challenges facing the successful prosecution of contravening mines?
5. What needs to be done to see an about turn in the mining industry from a social and legal perspective?
6. Do you think you will be successful in criminally prosecuting the directors currently under trial?

**Endangered Wildlife Trust (EWT):**

1. What sort of EIA's are they [mines in the area] doing? Are they involving you guys to look at the crane for instance?
2. Where is the public consultation that the law states one should have?
3. What was the rationale behind this [mining indaba] not happening?
4. Outline the capacity issues facing the State regarding enforcement [of law with reference to mining companies]]?
5. What sort of activism has there been now after this regarding coal mining? Any groups such as yourself?
6. When did the coalition of NGOs you speak of happen?
7. You say you've stopped prospecting at Chrissies Meer, have you had any other successes?
8. What are the farmer's sentiments regarding coal mining in the area?
9. Mining is a reality in South Africa, especially on the high veldt, but whose responsibility is it to ensure sustainable development?
10. What do you hope to see for the future?

**Federation for a Sustainable Environment (FSE):**

1. From a legal perspective, and in your opinion, is the South African coal mining industry at large a well regulated and morally responsible (ecologically and socially) sector?
2. In your opinion what role does the Department of Minerals and Energy play in [the development and implementation of SLPs], if any?
3. In your opinion is ecological rehabilitation of mines done satisfactory? Is there proper see-through on the ecological front?
4. What is the cumulative impact of the current mining sector in this region?

5. Why do we not have a blue print for mine closure in South Africa?
6. How do you feel, what are the prospects for [achieving protected and restricted areas fee from mining]?
7. What is your take on the social impact of coal mining?
8. I've seen Mariette [Liefferink] delivering reports in parliament, are those reports taken seriously?
9. One looks at the proliferation of the mining industry as a whole, in platinum, gold and obviously coal, what do you and your organisation foresee in the future?

# Appendix 3

## Informed Consent Form

***Mining for Development? A Socio-Ecological Study on the Witbank coalfield***

*(To be read out by researcher* before *the beginning of the interview. One copy of the form to be left with the respondent; one copy to be signed by the respondent and kept by the researcher.)*

My name is John Karl Filitz (student number 206522409). I am doing research on a project entitled *Mining for Development? A socio-ecological study on coal mining in Witbank, South Africa.*

This project is being supervised by Professor Imraan Valodia at the School of Development Studies, University of KwaZulu-Natal.

I am managing the project and should you have any questions my contact details are:

School of Development Studies, University of KwaZulu-Natal, Durban

Cell: 072 830 8901

Tel: 031 205 8000

Email: jkfilitz@gmail.com or 206522409@ukzn.ac.za

Thank you for agreeing to take part in the project. Before we start I would like to emphasize that:

-your participation is entirely voluntary;

-you are free to refuse to answer any question;

-you are free to withdraw at any time.

The interview will be kept strictly confidential and will be available only to members of the research team. Excerpts from the interview may be made part of the final research report. Do you give your consent for: *(please tick the options below)*

| | |
|---|---|
| Your name, position and organisation, or | |
| Your position and organisation, or | |
| Your organisation or type of organisation *(please specify)*, or | |
| All information received from you, via email correspondence, including the questionnaire below concerning Rietspruit's social plan, or | |

| | |
|---|---|
| Just the questionnaire below concerning Rietspruit's social plan | |
| All of the above | |
| None of the above | |

to be used in the report?

Please sign this form to show that I have read the contents to you.